Higher Education SUPPLEMENT

Dainton fends off Scots attack on libraries plan

The University Grams Committee is to set up a special inquiry into to set up a special inquiry into said, had little adequate information much it would cost universities tion on library costs and henefits. In follow the recent Ackinson report. In addition, the UGC was perfectly tocommenderions on liberries and

Anne Whiteman, of Lady Margaret Hall, Oxford, will lend research into the recommendations for deposipories of little-used books and journals and for the need to revise to educate academics about the cost hibliographies when materials are of new books and their demand no longer available in the moin that arademics justify the acquisino longer available in the moin

favour with Scottish librarians, with a scheme for regional research libraries such as that proposed by the ference of the Scottish Library Association in Peebles lust week. They complained that it breached university autonomy and would put in the Scottish Reactor Centre as projects of inter-university cooperations. In the same reason, with a scheme for regional research libraries such as that proposed by yet developed a common approach. Originally the Smith Bank course, which starts in October, was funced down for the same reason. But the Scottish Reactor Centre as projects of inter-university cooperations. Now the CNAA plans to stop the same reason.

of the UGC, explained to the SLA than 11 university libraries were now full. By 1980, 30 would be full, Millions of volumes would nor be housed in university libraries unless there was o change in the economic

mathematics education

Critics of the report, Sir Frederick prepered to consider a library's special geographical or historical

But the Atkinson recommendations were no panacea for the prob-lens confronting libraries.—" centre, which pump lifeblood to university departments". Sir Frederick backed librariums in their attempts

Sir Frederick said that if the The Atkinson report found little Scottish librarians came forward arour with Scottish librarians, with a scheme for regional research

Mr Smediurs, gave the conference a blueprint for the future of Scottish libraries. At the jon would libraries. The research centres would be based on Alterdeen. The solution, of Professor R. 1. and which in the high quality Arkinson's working party had pro-

Now it is the £7.50 book

The most expensive subject urens, social Sciences in previous yoors, were science Language pure sciences try (£15.33), physics (£13.32) as in previous yours, were science and tochnology; in porticular, chem-istry (£15.33), physics (£13.32), zoology (£11.80), botany (£11.42), generol biology (£11.06), médioine

The price of British academic books has risen by 64 per cent over the post two yeers, occording to figures published by the library manogoment research unit at Longhborough University. The average price of a book last year was £7.50, compored with £5.57 in 1975 and £4.59 in 1974.

This increase is also reflected in the fell in the number of cheaper books now being published. The proportion of British ocndemic books costing less than £5 has shrunk from 58 per cent in 1975 to 45 pac cent in 1976.

The most expensive subject areas, The most expensive subject areas, Social Sciences 16.57 56° and 1974 arease price of the proportion of British ocndemic books costing less than £5 has shrunk from 58 per cent in 1975 to 45 pac cent in 1976.

The most expensive subject areas, Social Sciences 16.57 56° and 1976 arease price of the price

Independent study package as aid in mixed ability schools

in-service and trainee teachers proc-tion skills in planning public indetise skills in plonning pupils indeundent studies has been developed. by the microteaching research unic at Lancaster University.

The two-year rescords and sleveprogramme behind the Plouning Independent was commissioned and funded by the Department of Bduce-tion and Science with a grunt of £60,000 after the success of an earlier feaching package, "Effec-

A salf-instructional course to help be trained in assessing pupils'

epcelfie steges in planning iodepen-dent studies with o couple of pupils and he videotaped. The edvantage of microteoching is that the teacher is then able to evaluate his performdent studies with 0 couple of pupils and he videotaped. The edvantage of microteoching is that the teacher is then able to evaluate his performance by watching the recording.

"One of the unexpected results of this course for taachers was their discovery their in naed only take three shours to essent a pupil's it takes two to three tarms, at leost". Professor Perrotr said.

The seminers ond courses will be low directed at broadcusters, journalists, purple servants, and "almost anyme concerned with changes of still todes in eociety, in whatever there shours to essent a pupil's it takes two to three tarms, at leost". Professor Perrotr said.

The seminers ond courses will be directed at broadcusters, journalists, purple servants, and "almost anyme concerned with changes of still todes in eociety, in whatever the level of commitments.

The college emphosizes that his line level of commitments.

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The college emphosizes that his line level of commitments.

The level of commitments in 1971 he appointment in 19

science correspondent

in muthemotical edocation have bombarded the Council for National Academic Awards for the past couple of years. It turned them all down until last mouth, when it ap-proved a two-year part-time MSc at the Polytechnic of the South Bank.

The CNAA felt that previous applications failed, in some cases "alisto analgamate matheine course in mathematical educe cause the proposals arose from recent polytechnic/college of edu-

flow of unsuitable schemes by hold polytechnics and colleges know what be three or four regional research libraries under which would be a spokesman said there was a place tumber of undergraduate reaching for a small number of such courses -" but not twenty". The principa need was for lower level courses for mathematics teachers.

Mathematics teachers in sixth

farms and further education col-leges are expected to take most of the places on the Sauch Bank course, ulthough anyone with a degree in a mathematical subject and three years' experience teaching

apply.
Mrs Leono Burton, senior lecturer i mathematical education, sald all four core subjects (nature and philosophy of mathematics, mothe nintical undelling, entriculum and pedagogy, and problem solving) will pedagogy, and problem solving) will be innovatury. The modelnomatical modelling syllabus is especially novel and important, according to course director Mr Keith Oke, because it will show teachers how to bring not the real-life upplications

of mathomatics. Hat Mrs Burtan emphasizes that the Mrs Burton emphasizes that although the course will be imposed by in the way it makes mathematics feachers think allout their subject, it will not try to rom yet unother sure of "new maths" down thoir throuts. Indeed, it could persuade some of them to return to o more traditional type of teaching.

Media centre for London

Research activities will doal with the "output" of mass medio and how it is controlled.

'Novel' MSc in | Urgent teacher training talk at Thames Polytechnic

hy Judith Judd

Urgent discussions are taking place at Thames Polytechnic about next year's initial teacher training programme after its IIEd proposals failed to gain validation. The polytechnic has merged with

Dariford College of Education which, until this year, had its education courses validated by London University's Institute of Education. Now that it is part of the poly-technic it has turned to the Council for National Academic Awards for volidation of its BEd in movement studies. The college specializes in troining physical education teachers.

Mr D. F. R. Guilfrey, the poly-technic's director, said: "We submitted a proposal for the BEd which we thought had a lot of merit but the visiting group from CNAA thought we should take another year

"We ore still having discussions about the possibility of taking students for a certificate of educa-

Students in their second and third years will not be affected since their courses will continue to be validated by the university. The polytechnic planned to admir ubom

Birmingham will owe £½m

be £500,000 in the red by 1978-79 because it will have exhausted its reserves next year, Dr R. B. Honter, the vice-chancellar, bas worned.

In a recent letter to the Com-mittee of Vice-Chancellors and Principuls multiting the corrersity's financial position for 1977-78 he sublithat the university did not believe the Government's estimates for inflation of 5 per cent (pay) and 12 per cent (non-pay) were correct. But even if they were, the mirer-

stry's income would be 2.5 per rent short of what it uneded to spend to The university was anticleating an

inflation case of lit per cent (pay) and 15 per cent (non-pay) and, mak-ing economies on this hasts, ex-pected a defich of 1.5 per cent, which could be mer from reserves. But because of this use of resorves, the university would have a continuing deficit of 1.5 per cent in 1978-79 if existing commitments

were maintained, he said. fit will-rinn, the extra cost of incremental drift would be 1 per cent.

The proposed reduction in the Birmingham grant for that year tras expected to be 1.5 to 2 per cent, a larger cut than elsewhere because of the University Grants Committee's commitment to nocilical schools and expanding university. mittee's commitment to noedical schools and expanding universities. Bulencing this against possible increased income from unition fees, the university was budgeting for a deficit in 1978-79 of more than 1500,000.

Dr. Hunter warned that the increase in butol liCC grunt to the inversities in 1979-80 appeared to be totally insolequate to deal with the level of commitments, and formers do not go late higher through inortia but from the level of commitments, and formers do not go late higher and formers to the attitudes of pupils in through inortia but from through inortia but from the level of commitments.

Interventing this against possible two years.

The ossociation is the able two years.

The ossociation is the able

Mr Goilfrey said that

Mr Goilfrey said that I students due to come to be in September bad bees all problem and there was concern that they would be first that already system is sufficient coming.

He hoped that he consists would be sattoday polytechnic intended that training should content the ford The present ILEA por

The reorganization of teacher edu-cation in England is over "for at least os for as we can see", Mrs Williams, Secretary of State for Education, annuanced this treek. By 1981 there will be 43,770 places for registrating treathers in about 75 forcifinure of reacher to Polytechnic should best In a report on the ... education was out a subject nationally the reneeded to make provide The report also referred a ford's fine facilities. shadowed in a Government statement in January. These suclude
Preston Polyocchnic, Northumberland College, vid Brombey Institute
of Higher Education. In addition
six amexes of colleges are to be
closed, including the Camborne
annexe of St Murk and St John
College in Devon and the Castleford annexe of Bretton Hall College
in Vakefield.

Justitutions where tencher train-A spokesman for them this week that his pages with the Departmen of the and would remain under DES decision on the least

colleges will be a

later this month.

Institutions where tencher training was expected to cease, but which have been reprieved arc:
North Riding College (Scorborous), Padgate College (Worden Riding College (Paramouth) and St Mary's College (Neuvenstelle Mary's College (Neuvenstelle Riding the association's Scholar in plans for teacher education in Wales troe, Alvin Bayarsky least before the onl of the Purllomentary

three, Alvin Bayursky, hope the form the ond of the Parliomentary has been over the sold it issues. A decision on stopping and the renewal of inches and at the Polycontract.

A settlement to the days of organ Institute of Higher Education more likely after he as had been deferred because additional council elections for the days of the A.500 association and beautiful and the A.500 association and settlement of Education and Science A.500 association and Science A. the 3,500 association may professional practice and students were all enables in the melting pat.

The 7id voies cast index in the melting pat.

The 3id voies cast index in the melting pat.

The 10 voies cast index in the melting pat.

Pressed in the Commons by from the school's sudent spokesman on education, on cleated. Several as which spokesman on education, on cleated. Several as a final solution to the college were also defeated.

The majority of the men plans slowed sufficient room to be onling and fretten full—which she canacit. But the men plans slowed sufficient room to be onling and destruction of its plans slowed sufficient room to be onling and destruction of its plans slowed sufficient room to be onling and destruction of its plans slowed sufficient room to be onling and destruction of its plans slowed sufficient room to be onling and destruction of its plans slowed sufficient room to be onling and destruction of its plans slowed sufficient room to be onling and destruction of its plant rate, up or down.

The nadarity of the men plans slowed sufficient room to be onling and destruction of its plant rate, up or down.

The canacit is the melting pat.

The action is the state of substantial changes in the plant rate, up or down.

The new council men plant is plant rate, up or down.

The new council men plant is plant rate, up or down.

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The new council men plant rate is the plant rate is the plant rate.

The new council men plant rate is the plant rate.

The ence. Plans for Scotland are still

Institutions where tencher train-

July 1, 1977. No. 297

final college closure list

pa formers do not go loto higher discording through inortia but from of higher education loafitutions. Oxford end Combridge were overtions at the attitudes of pupils in those who subsequently did well as leave higher education through inertio.

Chief adviser sent

C

lege reorgonization, said the reprieve for these courses showed how important consultation between the DES and interested portles had been. Sinco Jenuary new facts had been brought to the dopartment's attention and the ettitude of local communities to their colleges revealed, he said.

The criteria for reprieve were not political. The constituencies or local muthority oreos in which the colleges were situated made no difference, Mr Oakos sold. What had mattered was the college's geographical location, les in-service work, transport opportunities and problems and the range of courses offered.

nextanty there was some bitterness omong lecturers whose causes were still on the final list, despite representations to the DES from hoth stoff and local authorities. My Malcolm Lee, o member of the NATFHE executive and a lecturor at the Donesser Metrapoliton less.

difficulties focing the former colleges of education. Mr. J. G. Owen, chief education officer of Davon.

THE TIMES

SUPPLEMENT

Higher Education

Joy and anger as minister gives | Sharp rise in poly applicants from overseas

Applications from overseas students to polytechnics have rises dramatically this year, particularly in englopeering, despite the increase in

chief education. Mr. J. G. Owen, chief education officer of Devon, which has successfully retained the sole maintained college in the south-west, Rolle College, hieted at competition omong colleges seeking to diversify their courses.

particularly buoyant from honte and oversess.

Mr Mourice Denton, first-year admissions tutor far mechanical and production engineering courses at Leeds Polytechnic, roported that the BSc production ongineering programme and HND engineering course had attracted 330 opplicants overall, 50 per cent Iraquan. It is said 'We have had anny more students opplying fram Iran. They have not been put off by the literase in foes."

A spokeemen from Neweonle reated o bottleneck.

The welcome the National Association of Teachers in Further and Illguer Education gave to the Govornment's revised list of closures was tempored by regret et a lost apportantly to improve tanching standards. If the Government had made all initial teacher training courses four years long, it could have saved seven more colleges and vasily improved the quality of professional training.

Inevitably there was some bitterness omong lecturers whose caurses

ne added: "The balk of overseas applications are coming from four countries: Iran, Moloysla, Greoce and Turkey. But while applications to science courses are all ap there are not a substantial number from abruad."

continued on page 3 | Classified index

peering, despite the increase in tuition fees.

Figures released this week by polytechnics, including Sheffield, Oxford, Preston, Partsmouth, Leeds, Newcastle and Munchester, show that at some calleges between 30 and 50 per cent of applications for next outman are from overseus. The number of students seeking places from the "oil rich" countries has reached a new high level.

The increase in demand for engineering and science places follows the trend of last year but the significant proportion of applicants from oversens was mexpected.

Oxford Polytechnic said this week that more than 50 per cent of the college's 7,500 applicants this year were from abroad. The college's BSC engineering degree has attracted 241 applicants overall, 80 more than at the same time last year, and applications to the Higher National Diploma in mechanicol engineering had almost doubled.

Orerseas applications hove also increased at Portsmouth. A spokesmun said that they had risen by 500 to rouch a new level of 3,300, uearly 30 per cent of all the applications to the college to date. Demond for places in civil, electrical ond mechanical engineering had heen particularly buoyant from house and ovorsess.

Mr Mourice Denton, first-year adventiged oversess.

It was migent to get mon-teacher training courses validated for Rollo, he said, but the jostling of such new courses before the Council for National Academic Awards had created a bottleneck.

crense in focs."

A apokeemon from Neweosile Polytechnie olso reveuled that the umber of oversens sundents applying fur places on the college's BS mechanical engineering course had doubled from 46 lust year in 89 this year bringing the total number of applicants to 181. Applications to read electrical engineering land risen to 149 from 15, 50 per cent from oversees.

He added: "The balk of overseas applications are coming from four

Secretary shies access and secretary design of the course from the standard of proper single and the control of the course from the control of the course from the course from

Contents

CVCP chairman



Frances Gibb talks to Lord Boyle, the new chairman of the Committee of Vice-Chancellors and Principals, and propagandist for universities 7.7

16-18 attitudes

Summary of a report by Alan Gordon and Garetii Williams on the attitudes of fifth and sixth formers to school, work and higher education, 9

Public opinion

History of education has overemphasized the role of the state and forgotten the role of public opinion, argues Harold Silver, 17

Russian writer

Richard Freeborn reviews V. S. Pritchett's biography of Turgeney, The Gentle Barbarian, 18

Top presidents

British lecturers in American studies give their views on American presidents in a survey by Ronald Wells, 13

Körner and Antony Flew

On the other	hand		5
Courses			6
Noticeboard			10
Letters			11, 16
Books			18-24

Fee change threatens college

system, Cambridge dons say

OU to put more emphasis New quadrangle opens on non-degree students

The Open University is planning to place a greater emphasis on the access of students not wishing two complete degree programmes, Sin Walter Perry, the University's vice-chancellor, has indicated.

In his minust range 2.

In his minual report for 1976 Sir Walter says: "While I have no doubt that we were right in the carly years in enucentrate at the provision of an acceptable order-graduate programme in order to establish the Open University and standing I feel that the time is naw ripe for a closer loak at the needs of the pot necessarily wish and the processarily wish as a pot necessarily wish and the processarily wish as a pot necessarily with the processarily wish as a pot necessarily with the processarily wish as a pot necessarily with the potential and the processarily with the processarily to complete a dagree."

The report of the university's committee on continuing education bull faid a stress on "adult concern" courses at lower than first degree standard, on the university's contribution to a autional cilicacommenton to a functional educa-tional advisory service and on the possibility of producing "vore" learning unterlais for professional training.

Discussions on eveilir transfer had been held with the Committee of Directors of Polytechnics and the Financil for National Academic Awards, rellecting the university's belief in the increase of inter-changeability of credit between higher education institutions.

remerly this, maintains Sir Walter. The report says: "We have always students and grashines obtain just recognition of their achievements

an examination of the potential of the Open University hold acting alone mit, or a more important, acting to collaboration with other institutions to play a wider rule han hitherto in a planned national

educational programme "
Sir Walter says: "This must be, today, our target for tomorrow and crossiderations of the corrent econimic strains must rot prevent us, ar the Department of Education and

to fire must be delived."

Sales of Open University course majorial in 1976 had exceeded £630,000, despite the heavy codacks in education spending in the United Kingdom and in several avesors "One of the facture which led the university in case which led the university in case which led the university in case which the university in the discussions with other institutions on transferability."

**Congruent and in several average unrease markets. About 50 per cent of the universe is overseas currency and there had been a great increase in the sale of films to the Middle East.



Mr Harold Macmillan, chancellar of Hxford University, last week apeneal the new Halywell quadrungle at Heriford College, Oxford. The buildings, portly new and purtly reconstructed from old Holywell bauses, were begun in 1975 in the designs of orchitect Peter Shepeard. They cost just under hull a million pounds, including the purchase price of the site, and include a lecture ruom for 100 and 54 study bedrooms.

Over half the money was contributed by all members of the college, 45 per cent of whom responded to the callege's appeal. A substantial contribution was also made by the Baring Franchistian—just 100 years since a contribution by Thomas Buring MP respected the college after 72 years' closure due ta under-codowment.

The college is now launching o £200.000 append for another building to be built in the south side of the quadraogle, enmprising a larger lecture theatre and 34 study bedramms.

Inspector leaps into breach to

defend study of history

London University to review senate election machinery

question of teacher constituencies in a review of the liest droft of its proposed new statutes. In the draft, published last July teacher consti-tuencies (the loides which elect members of senate) would be based on hunds of studies rather thou on

Some objections to this proposal have been received from schools of the university and the Association of University Teachers has proposed that the constituencies be based un

Tho AUT has been asked minimize two representatives in the review body which would be chaired by the vice-chancellor, Dr. Frank Harriey, and include representatives of the academic and collegiated councils, and of conviction and the

The review was pledged by the

Lady Wedderburn

In The THES of June 17 we stuted incorrectly that Professor K. Wedderburn's wife was professor of sociology at Imperial College. His wife is Lady Prances Wedderburn. We apologize to Lard and Lady Wedderburn for the Allerance of the College of the Wedderburn for any distress thi may have caused them.

Lewin fund starts

Lewin fund starts

A trust final has been established in meanury of Dr Sherire Lewin, who are constructed in meanury of Dr Sherire Lewin, who are constructed in meanury of Dr Sherire Lewin, who are constructed in meanury of Dr Sherire Lewin, who are constructed in meanury of Dr Sherire Lewin, who are constructed in meanury of Dr Sherire Lewin, who are constructed in meanury of Dr Sherire Lewin, who are constructed in meanure of Dr Sherire Lewin, who are constructed in meanure of the properties of the properties of the said Carlo of the said Carlo

London University is to look at the vice-chancellor during his recent Crass examination at the hearing of the mivershy's Private Bill in the House of Lords, If the Bill is passed, the university will have the power to make changes to its statutes sub-ject to certain safeguards. Reviews have also been promised

on the composition of the court and some aspecis of the posts of views chancellor and principal—length of tenure of the vice-chancellor and the role of principal.

A morion is currently before the

House al Commons ensuring that the Bill will shortly have a second reading. If it is debated it will go

before a select cumulities.

Mr. Juhn Akker, deputy general secretary of the AllT, which is periforing for changes in the Ilill, said he had received 12 latters of support from MPs this week above. So for of least 21 had openly declared their aupport. dews were personal and that what

unfavourable position in the option

A stirring defence of history and He questioned the assumptions behind the Great Debate—that the of its value in education was made this week by the chief staff out cannigh students equipped for the world of work. Youth uneminspector of history in the Department of Education and Science. pluyment was going to be a factor for some time in come, he said, Those who want to diminish or dolish our discipline should justify and people were going to be required in work less and less. its absence", Mr John Slater told he minud incering of the history

of education as training for work we may well be missing out on the important espect of teaching Education.
The fives of history between in further and higher reducation had people in survive in unaccustomed periods of leisure." A subject ld.; history could be useful here.

As well as helping people to enjoy their leisure hours, the study of distancy could head to a range of coreers. Historians had not been assertive enough about providing evidence of the nonther of their rule renews who went but a business or industry, NATEILE's history section

he was saying was based on a combination of hunch and experience.

At O, A and degree levels, history was still a very impular subject but about half of all school pupils gave it up at the age of 14. It had on its activities.—TES. anxhus in lonation its buse in puly-technics and institutes of higher education, and would like to hear

Arts graduates worst hit

Cuts in the number of jobs in tha public sector last year hit arts grad-nates hardest, according to two uni-versity careers reports published this week.

section of the National Association

for Tauchers in Further and Higher

been dogged by appalling warry and difficulty, he said. Decisions of a

violent and unpredictable nature had been token by the DES; in par-deular the callego of education

side their main area of work.

Without on extraccilinatily good degree in the orts, it says, possigned an obvines the compete impossible. Teaching still remained an obvines choice, but the rest bad to compete for Jobs in the private sector.

Against the trend, more of Aberystwyth's connumbrained social studies graduates entered becal and central government than the year

Ruling urged on five-year result delay

The Conneil for National Aradem Awards is being pressed to make ruling on the plight of a forms London fashion student who ha been waiting for five years to her if he gained the diploma he to examined for In 1972.

Mr Stephen White now i National unil Local Governmen Officers' Association, has called for J decision about his cuse which we first referred in the CNAA Bi years ago by Middlesex Polytechic

Mr White took his diplome is in The authors, whose study is published in Liquis Bank Review this week, doubt whether this ratio should be increased, because the health service uses doctors inefficiently at the montent. "If doctors huplemented effective purcedures and design at Hornsey College of Act may mouths before is berge. as a constituent college of life sex Pulytechnic. While eachder internal assessors agreed the la hail passed the DipAD the court exactiner failed him on biell

A subsequent laquiry heat Dr. Michael Edwards, depuy: tur of Middlesex Polyeta alleged that the examination of ions relating to the DipAD him heen properly carried on hillomsey College's examine; huard. The impulry team distinct Mr White should have been awarded the diploma, a new mendation that was approved by judytechnic's academic bard's 1974.

A report by the team mained "The lower of assessors could Mr White's case without doma because there was a discrepant marks of the chief study of least 17 per cent (internal) and Sp

Mr White mos claims that It external assessor's mark & marked in with those & 2 internal ussessors he would be gained an upper second at feat the diploma. "If the last assessors had had their way lo tave been one of the top seed In my year", he said. "My work was differented surred and humanas, but led

science prapage in purvide for each student receiving a mandatory grant a fixed sum for college fees, which average about foot a year and are payable over and above university takion fees.

After that, the arrongements would be reviewed "In line with arrangements for tuition fees in institutions of higher education generally." produce a conventional blood pleased after the assessment Mr White planned to resident MA by thesis at the Royal cele of Art on leaving flurses killing as the follower to gain the

dipluma was forced to take up administrative post with the National Union of Students maintains that the long deky in aking u ruling on his rase base him his chosen career lo fashlee. the past few years because of the

by Frances Gilds management of English at Cam-two professors of English at Cam-culleges will not have that option. Two professors of English at Cambridge have warned rhat changes in landing included in new college fees arrangements may threaten the college teaching system.

In a letter to the chalman of the English faculty bours! Professors Frank Kermode and Raymond Williams note that for 1978-79 the Department of Education and Scheare propage in provide for each student receiving a numdatory grant.

huprove the health service. Pros-

this year, not to discuss proposals lor changing the teaching and examining of the tripos.

The decision followed a report by a faculty working party under Professor Kermode (THIS), February 114 which was relacted by the

111 which was rejected by the majority of the faculty.

From Octuber, all students in receipt all a manufacture. receipt al a manual pory grant, even the minimum tage. with lave "approved " fuiting fees paid, and col-

The DES has agreed that for 1977-78 it will pay college fees at deemed to full within this "appropriate and Combridge for all statements with a mandatury grant, an assimated cast of £2,500,000.

"We have one year of grace", there alight be suffletent funds to maintain the existing supervision the existing supervision the review membrated above continued and their college foes lan extra £600 and their total ubulling line is by no means improbable."

[Conveyd Intring tees paid, and college fees, for next year at least, are deemed to full within this "approved "category.

In practice this means that the quarter of (Abrilge students who receive the minimum grant through their minimum grant raised from L50 to £80, but will have but their university tuition, and their received the minimum grant raised from L50 to £80, but will have but their university tuition, and their college foes lan extra £600 and their college foes lan extra £600 and their college foes lan extra £600 and their college foes is holding

per student. For 1978/79 the DES is holding

unproved effectiven number of patients.

regular, perhaps annual, medical manpower review, "openly dehated anced medical education, to provide manpower review, "openly definited health care in more affinent foreign so that the effects of short-term changes in the forecast population.

M1 Walker and Mr Maynard have size and other factors can be integrated from present groted into policy making ".

Leid Tould's Reval Commission on Medical Education 10 years ago there is already a small surplus of dactors rather than the 10,000 deficit forecast for last year. When they drop Tould's assumption that the doctor; impulation ratio should grow by 1.5 per cent a year, the surplus becomes large—5,500 by 1380.

pects for exporting the surplus do not look good because there are too many doctors throughout the Western world—" (orthermore the reason why lirish taxpayers, or indeed any taxpayers, should pay, via state financed medical education to unresidual encoderation of patients."

This proposal is a major department from post practice and might be difficult to implement, they ask mit. A less indical improvement could be achieved by instituting a regular, perhaps annual, medical

Too many doctors, survey says Fratt and Burgess urge in the need for doctors' service social scientists from York University supports recent vlaims by some sections of the modical profession, especially immor hospital doctors, that British medical education has espanded roo much. Also Maynord and Arthur Walker supports less to keep observed the terms used by Lord Todd's Royal Commission on the terms used by Lord Todd's Royal Commission on Medical Education 10 years ago there is already a small surplus of the polyment; cat medical school made in the terms of the support the simples; or pay doctors be support the simples; or pay doctors be support to the control of the production of the system of polyment; cat medical school made in the terms used by Lord Todd's Royal Commission on Medical Education 10 years ago there is already a small surplus of the polyment is control to abandon the norm of a fixed the system of polyment; cat medical school made in the production of the production of the support the simples; or pay and employ more deature in they delected and the production of the polyment to training by the training doctors and the production of the polyment of the polyment of the support the simple of the support the simple of the production of the support the simple of the production of the control of the polyment of the production of the system of production of the support the simple of the production of the production of the support the simple of the production of the production of the production of the support the simple of the production of t

heal anthurity: the distinction between advanced unit ann-advanced reark should be abolished for financial and administrative marters."

It described an observable to the present set up in which higher education would once more become a printer enucern of individual anthorities. The novement of students from one area to mather could be met by charging more realistic less than at present. Smaller authorities are the distinct of the regional advisory councils has been advisory and the resisied. There is the saving on student residence the surface of the surface o

The committee mater are Conton to decide. MP roves signatory the manage ment of the polyterlinic, and colleges was told this week to abolish the system of pooling the costs of all authorities.

The argument than higher education is a "national" matter by apprious. Lalutation as a whole is a national concern, but we have decided at about be provided togethe. The arguments for daining from edocation committees,

The argument that higher edo

local authorities. In evidence presented by staff of su Gregosthulity, self-government, the centre for institutional studies (esponsiveness) apply equally in at the North First London Polytech, higher education. There are, of at the worth 1 b) London Polyteyn-any the abolition of the regional advisory committee, was also recon-incided and a scheme for rejuvigo-mended and a scheme for rejuvigo-tion for the regional mathematical in the region of the region of

rating Leaf authority participation in further education set out.

The abouty on whose authors include Mr John Prant and Mr Tyrell linegess, well known as critical fit the academic ethos pervaling education in Britain, said: "Complete resonnsibility for lighter education to the same plete resonnsibility for lighter education to the same plete resonnsibility for lighter education to the same body—so that work of all levels can be accommodated: academic definant anthority: the distinction between adrinacted unit annual vanced work can be resisted. There is the saving on student residence at unitantly has no number of including the called the advantage of the action of returning the advantage of the medication of all levels can be resisted. There is the saving on student residence at unitantly has no number of including activity.

UKCOSA asks to see Oakes on fees

The United Kingdom Council for Overseas Sindent Affairs has asked for a meeting with Mr Oakes, minls ter of state for higher education, on tuition fees for 1978-79. Mr William Beale, executive secretary, said this week that UKCOSA wanted to be invalved in the decision this year rather than be told about it afterwards

Beale, executive secretary, said this week that UKCOSA wanted to be invalved in the decision this year rather than be told about it ulterwards.

The points which UKCOSA would press with the minister were whether, if the Government was going to abolish the differential lofters between home and overseos students, that would orean a rise for home students; whether any increase could be kept strictly within the rate of inflation instead of abova it, as far 1977-78, and third, the Government's intentians obour overaceas students an eourses who had atarted with certain ideas of what the cost would be.

It would also osk whether the

It would also osk whether the Government was going to formulota on ovorull policy on oversoas stu-donts rather than let there ba o "feea far all" between institutions, ond discuss the question of the bard-ship fund.

The hope that further increases hi fees for ovorseas studeots, upart from those to mact ordinary inflation purposes, would not be neces-sary was expressed by Mr Oakos in the Commons this week.

He stated that the provisional oumber of overseus students likely to attond British universities in 1976-77 was 33,000. A modeat reduction in numbers was likely in 1977-78 and 1978-79.

Adviser goes back to atomic work

be firm favourite to succoed him. It is possible that the Government might than exteed the AEA's terms of reference to oncompass non-nuclear forms of energy.

nuclear forms of energy.

During his three years in White-hall or Morshall devoted considerable affort to supervising the first portant series of studies the Energy Department has been publishing on non-polluting alternative occupy sources such as the sun, wind and woves. He helped push the dapartment's non-nucleor research offert up to the current leval of £22m a year.

Expert support for genetic engineering

Genetic englisecting must gn aliead under proper contini-because its notential benefits far outweigh the

(GMAG) under Sir Gordnn Wolstenholote, who chaired the meeting. Dr N. H. Cwey, director of binchomical research for the pharmacecotical firm G. D. Scarle, said the dangars of the "recombinant DNA" techniques used in genetic engineering were sometimes exaggerated out of all proportian. Even if a new pathogen was created by accident, there was no reason to bolieve it might get out of control and cause on oplidemic.

ceasooa.

A further note of caution came from Professor John Edwarda, professor of human gonetics at Birmingham University, who advocated a ban on deliberote altoration of human ganas—even to cootrol dis-

Guido Alamusi on Shokespeare Profile of Preston Polytechnic

The case for the terilary college Geoffrey Marshall on the Com-

school is deplorable

political science into schools was deplorable, Lord Robbins, chancel for af Stirling University, said last

Economics at

for and this had taken sense to collect.

"The differences of the wright parties have been explored and it have now informed the CNA full there is an unresolved displication." They have the machinery to the with this?, he explained.

The CNAA is likely to be carried and the collection of the explained t

Eight Education

Eight Bingley ur likiey Collega (Broduction of London Education Authority had understand that their allocation of London Wellytechnic with Maytechnic of London Education of College with Brunel University. Education of fields the Shorodited places in the total the DES was in fact trimbilities by London Education of London Education Authority had understand that their allocation of London Education of London

hut I would ask him to come to ond Ilkloy Calleges lies with the South Forkshire to talk to people in the schools on to make they are going to keep to be in the schools. It is not coonghout they are going to keep to be in the schools. It is not coonghout they are going to keep to say they should go to Sheffield or Huddersfield—those places ore to far; teacher a need a centre for resnucces to combat educational deprivation here, close at hand. It is not open to be would probably have to cease. It is not far; teacher a need a centre for resnucces to combat educational deprivation here, close at hand. It is not open to be would probably have to cease. It is not far; teacher and a centre for resnucces to combat educational deprivation here, close at hand. It is not open to far the smooth that the smooth that the stall had special expertise in ftalling. The future of teacher advection in the London ards is not yet clear. The DES annotunced that the total ment this week. In full was as allocation of training places to loner London was increased by 150 to lone the proposals in end teacher train the proposals in end teac

ing ot five institutions, namely, North Riding College, Padgare College, Portsmouth Polytechnic, Rolla College and St Mary's College,

ditch College which is likely to merge with Brunel University. Beducation as Husley)

Jicchaic of Ceotral London to the big was in fact triangles and Purzedown College of Higher College of Hig

Minor reductions have been mode at the following 10 other losthutions, as follows:—

Newcastle Polytechnic 900 750
Leeds Polytechnic 900 750
Leeds Polytechnic 1,000 900
Triolty and All Saints', Leeds 650
Telester College 1,000 900
St Martin's, Loncaster 625 575
But lie los remained firmly condition of training places at a number of other institutions, The number of other institutions, The lain's eoargy naeds in the foragee able future, and that nuclear power is the sun, wind and wores. Ho helped puals the daparty mont's non-nucleor research offort up to the current leval of £22m a year.

But lie los remained firmly conditions only a small contribution to Britaining places at a nuclear and fossil fuols could make only a small contribution to Britaining places at a number of other institutions, The ravised lotal in leocher training places able future, and that nuclear power as the sun, wind and wores. Ho helped puals the daparty mont's non-nucleor research offort up to the current leval of £22m a year.

But lie los remained firmly convinced that these alternotives to nuclear and fossil fuols could make only a small contribution to Britain's lamest nuclear power able future, and that nuclear power as the sun, wind and approved to the Linux proposed for the Inities. London to the current leval of £22m a year.

But lie los remained firmly convinced that the numbers mont's non-nucleor research offort up to the current leval of £22m a year.

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But le los remained firmly to the current leval of £22m a year.

But le los remained firmly to the current leval of £22m a year.

Desplie the rsin all concerned man is the synon many improbable."

Among lumediata coasequences are that the teaching performance of colleges, already unequal, may become more so, since richer colleges might wish to spand their

tral nr local government dropped from 24 in the previous year accepted posts and the previous year. Mixed reaction to college closures

extremely remote risks. Seven scientists gave this reasont

Ho also attocked the lilea that

with genes.

Dr Peter Rigby, who is experimenting with tumour virus DNA at Imperial College, London, said that although oil ahades of opinion about ganetic engineering could be found within the scientific community, the majority of those who had sariously thought about the lasues had concluded that the risks were extremely low—far below those accepted os a mattar of course in human life. The scientific benefits, especially for modicion and agriculture, would be tremendous.

Professor Robert Williamsoo, hosd of blochemistry at St Maty's Hospital, Medical School and a member of GMAG, emphasized the craftle control by final sy community, While he personally favoured controlled genetic engineering be said expandiments health to the formal and a member of the second processor in the second control of the second controlled genetic engineering be said expandiments health to the formal control of the second controlled genetic engineering be said

trolled genetic engineering be said expariments should stop if the pub-

NEXT WEEK

Interview with Engene Genovese South Africa-new books reviewed by S. E. Spence

US scientists speak



years give no cause for optimism, the Committee of Vice Chancellors and Principals said this week. In the first issue of an occasional news-letter, it expressed concern about the decline in the value of the re-current graat per student, which had dropped by mare than 6 per cent in the past five years.

The committee is, accordingly,

all the mure disappointed that the provisional grant for 1978-79 represents yet mother cut in resources, thus continuing the decline which began in 1973", it says.

"A small step has been taken in

so that the committee can report generally on developments to a wider audience. "It is not a substitute for formol communication by the rounding communication by the rounding content of the rounding snys. Among the topics covered are: whether the Covernment intended tuition fees; Voluo Added Tox; to review the recurrent grant in salaries; national insurance contri- view of its miscalculation.

Movement studies course

approved at Thames Poly

Thomas Polytechnic has received approved to launch a new certificate of education course in movement atualies following the Council for National Academie Awards' refusal to validate the college's proposal fur a Bachelor of Education degree.

The swift decision by the CNAA means that the polytechnic, which recently merged with Dartford College of Education, will be oble to emol 50 students on the newly-epproved certificate course this October pending o second submission to the CNAA of its BEd

The naiversities' provisional repairment grants for the next three parents and superiorations.

On the universities' grant for py77-78, the newsletter says that the recurrent income universities expoet to receive next year is one per cent less than the sum necessary to meet even the optiolstic rates of inflation assumed in deter-

mining the grant.
"If the rates of inflation turn on
no be higher than have been ussomed, then the year alread which is bound to be difficult, will cupidly become desperate unless further resources are made avail-nbla."

To Dr Keith Haonson, MP, vice-chairman of the Conservative Parliamentary collection committee, "A small step has been taken in return to longerherm planning, but some of the provisional grains, amounted for the provisional grains, amounted for the provisional grains of this week that the Government's provision for substitute in the universities' returned grain may their volue will be protected against the inroads of inflation."

The newsletter has been launched the the expension for substitution of the wildly wrong becomes of the rate of inflation. If the constant of the constant of

Goldsmiths' claim to become university school spelled out

Goldsmiths' College should be primarily because we believe it granted the status of a school of London University, Dr Richard Hoggert, worden of the college, writes in the finite issue of the university by the believe in the finite issue of the university by the same unumbers of London section by the first contains the same contains t versky bulletin.

versky minerin.

Its present status was both
anomalous and inhibiting, he says.

It was one of the last of the Instintions with Recognized Teachers
(IRTs) which disappeared in the
late 1960s with the mantion. late 1960s with the creation of the polyterhoics. Of the handful which emained all except Goldsuddis' were small and specialized, such as the London Graduate School of Husiness Studies or the Rayal Academy of Music. Now Goldsmitbs' was large,

varied, practised in degree work, and already in many respects com-parable with a school of the uni-tersity, a status which it should main as soon as possible and which remained the rollege's stated pulicy.
"Apart from the academic grounds for that status, it would seem in net of believed social justice that this neglected area of London should

have its own university institution." While many members of the university supported Goldsmiths' clubu, of few had their dualits. Goldsmiths' was not asking, however, to be judged academically any less stringently than any other pact of the university. "We seek school status

smalis' to the numbers of London Differential was infinitely at Landing Differential washing and into the expansion of other schools, and into their overall finite from the Hinterial supported Carlo a Last claim, the summer of this year, to deniries. is to be fluored develop dreamly the Department of Education and Science, and it did not seek to change that, It was not intending to seek HGC financing.

Overail, its case was based on and unit grounds unit the need for forther ocadentic growth. It was restricted in its development by restain rules which were applied to IRT's a decade ago and were now As to whenter an institution

which in port was translating, some of its work being radicated by the Council for National Academic Awards, could be obnitised as a school of the university. Dr Haggert says the question of this work work would have to be considered. Hat he osped it was not assumed that trous-

"My own feeling is alm the county needs made of it and that more will emerge stendily; there are signs of wils already."

Coombe Lode director looks

in spine of local surbonic that the future of Coombe let the further character staff of last week gave a mediag of of-hearts a pluring account of its

sibilines.

He orble the annual media, the Association of VicePrincial Institutions—for to the remained the Association Vice-Principals of College_d' Caumbe Lodge had a laure at the college for training college mag. centre for training college adi-liritate and on behalf of Euge:

Coombe Lodge's future in wa oulit because the Count of La domar because the Cound of he liducation. Authoride too started no inquiry into soft cost. The culluge's loss of directly from the Rate of Grant total and so and charge. Mr Wheeler, for sever

views except on the quite European integration. The id-aspired to become a consi-feeding-in European idea in

liritish education debug mining developments in Iritished education for transmissionary than officials in Western Law 1

At their meeting the principals also heard from kel

fulbert, the association's set fulbert, the association's set the Association of Prior Callegos had related sort would not, Mr Indiger and a full control of the two bodies. The would not, Mr Indiger and a full control of the two bodies.

a beaver combain sticking his taugue out benerth what look like two gudlocked libbes, then I leputy director of the coky deputy director of the older it was virtually impossible a Coombe Lodge once chart-at present. Indeed, they as strong onse for expanding he of in-service training for ch-staff carried out there. A sa-focus of its work was pres-heads of departments, esta-and principals for the maga-responsibilities they had a cobare news for you. A fellow crest insomniae wrote in A fellow crest insomulae tyrote in the last issue of LSE, the school's twice-yearly magazine, out asked "Why"—I paraphrose the letter something wicked, but this is the gist of it—"why a beaver?" I have waited six sleenless months, counting sheep that turned into beavers as soon as they got over the fener, and now the bitest issue gives a tundawn on the whole business.

"The files do not give any real."

he did very well."

Not the least problem fuced by the Open University organism on this machine, which was specially limit to Mr Curley's teonochistic specifications, was accordant step tunked "tuke it all leution".

"It theses" to de ampthing ", Mr Curley explained with barely contended the purists." Looking ahead, Mr Wheles, Commbe Ludge took to play

or nights wondering why the London School of Economics' crest depicts

1.SE Beaver Crest

Animal crackers

rondown on the whole business.

The files do not give any reasons thy the heaver was picked, it says, but fire alternatives have been offered at one time or ontohor: It is a dilligent animal; it is a punta Sir William Beveridge, its then director; it is a print on Sidney Webb, its founder Isomething to diswift webled feet); it is a bridge builder Ibetteen disciplines); out it is a rare, much-hunted and valuable conomic product and thus symbolic of economic inquiry Into scorcity at means to satisfy wants.

Now I can get a good night's sleep less as soon as I find out why the Polytechnic of the South Hank's trest has a purphise trying to trush

trest has a purpoise trying to trush a ferr edition down a suit of urm-



Lard Toyle, with twas in politics for 20 years before going to Lerds in 1970 and was Minister of State for Education until 1964, will also be exploying that congary of departmental decision-making in orbital violations with the accepted afterwards about both the runtents and documentations. which civil servants commit the equipment Medant is message.

I could tell you more, but the BBC have asked Lord Boyle to give the Reith Jectures and not me.

When the Open Pareersity organist when the trien transcersity organize method to plan at a vecent degree ceremony in Landon's Alexandra Palace, he was confronted by a ficenal, from kephonyl £50,000 materal. ouk-encused mouster said to be the onk-enersed monster said to be the hugest continuer organ in the world. It had been set up there by Mr Carla Carley, the 20-stone, 24-year will enthusiasm-eneased-organ virtuoso from Philadelphia who is giving a series of concects there. "It tuoso from Phihadelphia who is giving a series of concects there. "It is a really wild organ and I don't think the paor eng knew what him. If you are used to a smaller one, you could do yourself a lot of thusage playing one of these, but he did very well."

Not the least problem fuced by the Open University organist on this machine, which was specially built to Mr Curley's iconochstic specifications, was at organ stop

Tourist tariff

Taking a leaf out of the Dake of Bedford's look-keeping, Mugdulea College, Oxford, is to charge tuurthe college this summer. Although the college this summer. Although the public may still visit the moin grounds and kuildings, there will ke visiting hours and a rharge—still to be decided—to enter the hall or an exhibition to enter the hall or an exhibithm room contabiling

an exhibition room contabing Magdalin treasures.

Tickers for admission will be on sale from the college shop in the chisters where view slides can already be obtained, but dot, as yet, sticks of rack with UCCA printed all the page theoreth.

sites of rick with OCCA printed all the tray through.

The must interesting feature of the Mugdalen plan is to charge admission to a set of studoul ricous, perhaps thuse of o fumous allumnus. I seem to recoil that mining thuse is my old school chum Piakerton, whom I have had oceasion in mention to you before hi a context of supring hunderney. context of sporting inudequacy.

I hereby after my services to give

I hereby after my services to give a conducted tour of his rooms. "This is where Pinkerton kept his electric touthbrush and this bottle once concained his acru lotion. And here is Pinkerton's unique close-tupping equipment." I would then be in an excellent position to explain that Pinkerton so loanhed any furn of sport that he used to hide almon his person twigs, apoona and once even a small brick with which he would stand on the houndary and his hose a the game pragressed in the bope of inducing a use hieed so violent than he would be sent back to the payling.

The Kennedy kit

writing about Whitehall in a pro-ferring each play its part in telling Tite stage

MMMMM...

The Royal College of Air held its attnal degree show recently and its Kensington fore headquarters were festioned with the colourful creative spour of final year students.
Equally colourful were the exhi-

hitors and their admirers who were either "daliblings" or delinguents either "daithlings" or delinquents giving the whole event the flovour of an onarchist's Ascat. Ruther fabolious men and really super-transen mingled with the lenthered and feathered wild mass of tyhou, by not large, the tronten dressed as if they were walk-ous to Sulante and the men as if they well. and the men as if they really wanted in take a motorbike to pieces or start a fight.

Conversation overheard here no

resemblance to life as most of us know it. In a curious meeting of Society with a rupital "S" and the sort of person who in normal circumstances it would most like to gut under house arrest, one middle-oged man in a morning sult with an "Ascot royal enclosure" button on his latel reas accord by a pink-haired fundangled thing (female) thus: "SIMON, MMMMM (kiss) HOWAAAHYDO?"

Stronge how even at this level the English Invariably prefuce kissing in public with the sound "MMMM" as if to indicate that it really is a source of pleasure despite all sensual evidence to the contrary. Seconds later o more full-blooded fautee (orange tinted this time, but still female) who seemed to know Shunn naive reall burst to Simon noire well, burs in:
"SIMON, MMMM (kiss) SUMTHINGLESE" and lotes "BYEEE

I saw Russell Harty, the television interviewer, and while I was out telephoning mather, when I keep informed of everyone I see, the lorge first-night crowd swarmed around Jubiloe mags with the royal teeth und nose jutting from one side, on unzip glric enlendar, a whole range of more mainstream designs, and a series of photographs depicting the tronofurnation of yerdi Yohoodil, ort student, from the kind of girl my annts in Dideot have got provisionelly penelled in have not provisionally penellled in for me to the rainbow coloured conferriun which currently adorns her

when I got bock I notleed that hy the oide of each set of work was a photograph of the exhibitor with age, oddress and telephone number. I olso moleced that some of the rather labulous men were soon on "SOOOZEEE, MMMM HOWAAII-YOO?" terms with the exhibitors and who knows, in the fulness of time, even, "SOOOZEEE, MMMM SUMTHINELSE".



NATFHE and training divide



Militroy, flouked by Harold Walter from the Department of Employment, luniched a session dominated by discussion on the social contract. The debate subsciptently and all not predictably narrowed down to pay and prices. No-one, of course, donies that in the heart of the social contract is the old demon of a pay and prices policy. Nethelesss, while critics of the contract, of whom NATFHE can muster not a few, inovitably concentrated on this ostect, to a depressing extent the same held true of those adopting a more flexible approach to Phase Three. The rowards of the social controct in terms of legislative change which hove hear most marked in the very oreas which conference in the near hose considered of portunent importance were thus emakely ignored.

Conference from 1971-74 was dominated by demands for legislation protecting and advancing trade union rights, promoting health and sufery at work and recognising sextual equality. Vet in Harrageta the

universaries and the polytechnics, tyhilst broadennes the range of choice and placing a greater emphasis on more specific skills, have been absorbed with an chang-ing radically the underlying phil-

Below the level of higher educa-Below the level of higher collica-tion problems have continually flywed from the proposition that training and education are readily distinguishable with training being the resoon didility of the Department of Employment. The result has been that the needs of the post-th-age group not in full time education have met eith a slow response from the Department of Education. The past, three years have exposed past three years have exposed the department's weaknesses in the sharpest fashion. At the same time suarpest fachton. At the same time as the Mannower Services Commission under the Department of Employment has been charged with the task of creating work schemes and providing training opportunities for the young memployed the chocurion department has been grappling with the new priority area of the 16 to 19-year-olds.

The difference in the progress of the policies has exacerbated the fundamental problem. Whilst the Mis has concentrated at pilot studies for curriculum development and found increasing difficulty in maintelaing propriets in further maintaining priorities in further education as local authorities wield the axe, the Manpower Services Countission has been establishing courses in the further education field in an impressive rate.

The problems lacing the colleges n adjusting to a new range of themainly supported by resources which can be cut off olmost as which can be cut off olmost as swiftly os they are mode available have been animum in comparison to the potential new challenge of the Holland Report. Not only does the report propose o greatly accolerated programme of courses but its clients will receive an £18 flot rore ollowance. Such a development will scarcely affect numbers in the accodemic sixth heading for higher education but both school sixth lorous and further education colleges catering for a where range of suntent will be faced with a major challenge.

The most welcome inhibite Shirley Williams could take to ensure there is no major distancentive to students routhuning in full time education would be to provide

time education would be to provide

lit hard et coffiles the litter and et control to the litter and etc. Service and the litter and less purchases are litter and less purchases and etc. The litter and less purchases are litter and

education courses validated by London University's Institute of Education. Now that it lo part of the polytechnic the CNAA is to act os the velidoting body. Dr. D. E. R. Godfrey, director of the polytechnic, said this week that students who originally planned to join the BEd course had been con-

The swift decision by the CNAA means that the polytechnic, which recently merged with Dartford College of Education, will be oble to encol 50 students on the newly-epproved certificate course this October pending o second submission to the CNAA of its BRd proposal, olso in the field of morement of the course this decision.

Until this year Darford had its

Dr Daiches to open | Essex plans Scots conferences

Dr David Daicbes, professor of English et Suaaex University and the son of a former rabbl, will give a lecture in St Glien' Cathedrai, Edinburgh, on October 28 to Introduced two conferences on religion which St Glies' is running in cooperation with Edinburgh University in cooperation with Edinburgh University. The Times Educational Supplement Scotland is to be one of the sponsors.

which St Glies is running in cooperation with Edinburgh University. The Times Educational Supplement Scotland is to be one of the sponsors.

The conferences will have one title, "The Scotlish Glit". The first, on October 29, will look at the identity of Scotlish religion past and present. The second, on March 11, 1978, will look at the nature of the Scotlish legacy in religion es it. hos been imparted to the Commonwealth and other perts of the world.

Donaldson, both of Edinburgh University, Mr John McCoffey, of the department of Scottish history, Glasgow University, end Mr D. J. Withrington, director of the Centro for Scottish Studies, Aberdeen University.—TESS.

The centre reflects the growing demend for conference lacillies in universities. In the past three years Essex's lucome from conferences end courses has risen from £14,000 to £200,000.

all-year centre

Warning of nursing cuts given

Health enthorides may haro to rostrict training schools intake of nuroing and other health and cause fewer people are leaving the profession, the Dopartment of Health and Social Security has werned.

The dopartment's planning guidenines for the next year states: "Among the manpower: planning issues which authorities may need to keep under review during the year, are the effects of the reduced to keep under review during the population of staff; and the proportion of staff; the possibility of changes in the proportion of staff; and the proportion of staff; the possibility of changes in the proportion of staff; the

two courses are senante and we are not yet oble to promise students the possibility of transfer to the degree."

All the students on the rertificate coarse will be woman. Entry will depend an opplicants having and A level GCE pass. Dr Godfrey odded: "The response from students has been good. There has been a strong levels have been as

and the second s

AV aids must prove their

economic worth-Annan

tizle, "The Scottish offit". The scottish offit". The scottish religion past and present. The second, on March 11, 1978, will look at the nature of the Scottish legacy in religion es it hos been imparted to the Commonwealth and other perits of the building and to subsidize world.

Lecturers at the first conference will be self-supporting to the building and to subsidize world.

Lecturers at the first conference to be the Rev Professor Academics of the Notional Committees of the nature of the Coornal to evidence that and operation to evidence that and severated that no evidence that and severated to the Coornal Broadcast last control to evidence that and severated that no evidence that and severated that no evidence that and severated the control of the Coornal transmitted to the Committees of the enuter of the Coornal transmitted to the Committees of the nature of the Coornal transmitted to the Coornal transmitted to

of Advisers,

Because of the ocenomic sline theo, it is going to be difficult to increase eudic-visual aids provision in the next few years unless it can be proved that they are going to cut costs. Lord Annen said. To do so it will have to be proved that you are getting better results in your teaching end/or saving staff time."

He added that the results to the results in your teaching end/or saving staff time."

In your teaching end/or saving staff time."

He added that the committee had been accused of lack of imegination in its treetmant of audio-visual aids, but the senne thing could be applied to the way it dealt with new technology ouch as teletext. Viewdota, satellite and cablo televialon.

There was one reason for this broadcasting, it was not research on broadcasting, it was not an academic work, he said. It was intended as a practical piece of work decling with prosect and future possibilities limited by economics. They did not see the lead of materiol could come in certain conclusions, wrong or right, and take a dictatoriel entende", he said.

Replying to u question as to whether educational broadcusting was too important to be left in the broadcasting, it was not research on believed in technical expertise to get the less kind of programmes: the opinion of broadcasting, it was not an academic work, he said.

They did not see the lead that the committee had dictatoriel entende", he said.

Replying to u question as to whether educational broadcusting was too important to be left in the broadcusting to get the less kind of programmes: the opinion of broadcasters the less thin of programmes: the opinion of broadcasters that the committee had dictatoriel entende", he said.

Replying to u question as to whether educational broadcusting was too important to be left in the broadcusting was too important to be left in the broadcusting to get the less kind of programmes: the opinion of broadcusting the broadcusting was too important to be left in the broadcusting to get the less kind of programmes: the opinion of broadcusting to a store the less that the decline and the same that the same

A Buth University engineering student shows an exercise car for paraplegle children to a visitor to the university's annual exhibition of undergraduate projects. Martin Inchao and Nicholas Yoward designed and built the vehicle for children paralysed from the walst down; ell controls, including trake and accelerator, one on the steering wheel. "The uesthetic equest of the car is very important, and its resemblance to the real liting is of parameters the projecter, they said. Ten other proctical design projects can be seen at the exhibition, which was opened last week by Mr H. J. Daulel, director-general ships at the Ministry of Defence and heed of the Royal Corps of Novel Constructors. Growth first at Newcastle

Growth of Newcastlo University the last year has been achieved the expense of research, finish R. S. Page, acting vice-thanks writes in his annual report is 1975-76.

The university had managed in the near the medical lanks by medical lanks by medical lanks by medical than one quarrer and to scheet it must be sumbed of the number of th

dental students.

The department of in plumed to expand by short of the cent, and e second chirt economies had been emblaced together with a few other rest



I confess to enjoying conferences which is perhaps Just as well given the nomber I attend each year. The amoal conference of the National Association of Teachers in Further and Higher Education ranks particularly highly in my affections. Although now relegated to the role of spectator, I hencilt from the insight of having been a delegate to the former Association of Teachers in Technical Institutions conferences for a nomber of years.

in Technical Institutions conferences for a number of years.

As belts an association whose membership has almost doubled in this period enach has changed. Conference now works six sessions in three days. The guest of homour speaks at the commencement of a major session with resolutions often crowding in mound his theme.

Thus in Harrogate this year Len Murroy, flouked by Harold Walter from the Department of Employment, hunched a session dominated

ment, humched a session dominated by discussion on the sucial contract. The deliant subscipently and all may predictably narrowed down to pay and prices. No-one, of causes, dontes that in the heart of the social contract is the old demon of a pay ond prices policy. Netheless, while critics of the contract, of whom NATFHE can master not at few, inovitubly concentrated on this ospect, to a depressing extent the same licht true of those adopting in more flexible approach to Pluse Three. The rowards of the social controct in terms of legislative change which hove hear most marked in the vory oreas which conference in the post hose considered of portinount importance were thus entirely round the isane of living standards. In this respect, of course, and intelligent and advancing trode union rights, promoting health on suffery at work and recognising sexual equality. Yet in Harrogete the debate on the contract revolved emiroly round the isane of living standards. In this respect, of course, in MATFHE is thereby a microcosm of the intelligent in the problem and the particular in the problem and the particular incorporation and the particular incorporation control in the problem and the particular incorporation in the problem of youth unemployment. This brings ne hack to the views argued, the Department of Education is holog forcod inlo an approciation thus priority for the debate on the contract revolved emiroly round the isane of living standards. In this respect, of course, NATFHE is the problem of the problem of the problem of youth unemployment the problem of youth unemployment the remaining provisions are subsiding.

Where conference, however, hold something unique ond of the group incorporation that problem in deutified in the 16 to 19 group mans urgent oction a number of constitution of the problem of the

by Frances Gibb

The first degree course in dance will kegin at the Lukan Centre for Mayoment and Dance at Goldsmiths' College in September. The Council for National Academic Awards has given the centre upproval for a rhree-year full-time course lending to a BA honours, which will be both

dance technique, choreography and movement. At the same time they will do written work, reading and take part in seminars. They will also study the history of dance only other arts. Aeothetic and crhical studies is also compulsory and will studies is also compulsory and will

and society.
Sintlents, who are selected by a

backed up by visits or theatre, emphasizes the course is a degree hibitions and concerts. course rather than vocational train-

are expected to develop their printing traditional career outlets such as interests through the choice of one the established company (as a performer or chareographer), some than, music accompaniment and students may find new jabs open composition for dance; dance nota- to them, such as company adminis tion; history of dance; and dance truote, dance reconstructor or

Students, who are selected by a combination of interview and undi-tion, are assessed both on their financing and held in trust by the practical and theoretical.

Ition, are assessed both on their thanking and near in the practical work and by written college through the university. It sechnique, choreography and movepapers and special studies, Students runs a number of full and partpapers and special studies, Students runs a number of full and partmust have a inhimum of two A time courses, including a three-year levels, but he exceptional casss can-didates of outstanding ability who du not have the minimum require-tion of the diagnostic and ments may be considered. Threspentic aspects of movement Murion North, the course leader, and dance and three-year training



Two new creative arts degrees

A new creative arts degree is to be offered by Trent Polylechnic from this annum. It will, says the college, be aimed at developing studies in the college. The aimed at developing studies in the college of the college. The college of the college dents' ereative, performing and eriti-

gramme will allow first-year stu-demo to read two malo subjects chosen frum art, music, drama and dance. In the second they will major in art, music or thama and a flance studio and performance and select another subject as a subsi-relicarsal rooms will also be availdiary. Third your students will

Oxford Polytechnic is to introduce

Analysis of the

clothing industry

Constructive engineering

llased at the college's Clifton site. students with the arts, including studios for sculpture, painting, photography, film-making, printenaking and ceramics. Somularoof music relieursal and teaching rooms,

choose one main discipline from art, music or drana.

Mr Malcolm Anderton, the course learning the full range of basic skills in such discipline, students will be encouraged in develop their own work in their closen special-

Newcastle Pidyrechnic is also joining the ranks of colleges offering degrees in creative arts. From September it will provide a three year BA lumours course in creative arts nimed at promiding students' understanding of the arts and developing their awareness of the arts' function in numbers society. There will be 50 places for students in the first year. The entry requirement will be two "A" level

passes has students at exceptiona promise in drama, music ur the

visual arts may also be necepted. Sue Reid

Middlesex in-service course keeps the options open

by Judith Judd

Polytechnic.

The whole third year of the courso is spuor gaining practical experience of civil engineering on a oite or in constructors' offices or laboratories in Britoin or abroad. In the final year, students will vary out individual projects us well as studying the production assects of civil Oxford Polytechnic is to introduce o now BSc in civil engineering construction, designed to counteract what the department of coostruction sees as "the normal bias in traditional civil engineering courses towards the design sector of the industry".

towords the design sector of the industry. The four-year standwich captured will be "firmly biased towards production activities in the Maid of civil engineering." Mr. C. G. Bridger, acting bead of denartment, believes it will be die only degree of its kied in the United Kingdom.

The curriculum will be based family on practical construction ectinology, though students will be given more of a grounding in planning, organization and manogeount than is usual in an undergraduate civil angineering course, The social and environmental inspact of construction will also be covered.

The polytechnic is hoping fur on interior many base to go overscos if they are determined to work of the British and the course may have to go overscos if they are determined to work of the British and the course may have to go overscos if they are determined to work of the British and the course may have to go overscos if they are determined to work of the British and the course may have to go overscos if they are determined to work of the British and the course may have to go overscos if they are determined to work of the British and the course may have to go overscos if they are determined to work of the British and the course may have to go overscos if they are determined to work of the British and the course may have to go overscos if they are determined to work of the British and the course may have to go overscos if they are determined to work of the British and the course may have to go overscos if they are determined to work of the British and the course may have to go overscos if they are alternative may have to go overscos if they are determined to work of the course may have to go overscos if they are determined to work of the course may have to go overscos if they are determined to work of the course may have to go overscos if they are determined to work of the course may have to go overscos if they are determined to work of the course may have to go overscos if they are determined to work of the course may have to go overscos

Law of the air and space

a study of education including this age group. philosophy, psychology, and sociology. They then go on to a study of their special options. The language and reading option

early childhood education.

The cliff-hanging conclusion last week to the negotiotinno between Britala and the United States about civil alc services between the two countries in a reminder of the complexity of the law relating to aircruft and craft in apace. What the law is ood how it is changing ara set out in a speciol course starting at University College, London, in October.

For some time the faculty of lows et UCL hos onounted a year's course on the legal aspects of aviation and outer opace, it is not exomined but its graduates do quelify its control of the course covers particular indication of World Affairs which owards a diploma in air and space law. The course is precise to members of UCL.

The general part of the course, which consists of weekly evening all in the consists of weekly evening better to law. It describes the existing bodies for reguluting air troffic and spacearaft, tho detailed legal requirements of flying; insurance of cargoes and the luw of llobility arising from operating nireraft. The second part of the course covers particular topics localizing that law to the cargoes and the luw of llobility arising from operating nireraft. The second part of the course covers particular topics localized to the second part of the course covers particular topics localized to the second part of the course covers particular topics of the second part of the course covers particular topics of the second part of the course of the course covers particular topics of the second part of the course of the course of the course covers particular topics of the second part of the course of the cour relates language to meaning and learning, and shows its importance

the South Bank.

An in-service BEd degree which take responsibility for remedial allows teachers to concentrate on enheution in an ordinary whead. n porticolar penfessional problem. The multi-cultural option books at has been hunched of Middlesex the social and historical reasons for the development of the present Education Studies form the core multi-cultural society in this counof the course and students can try and assesses the suclul position

choose one untion from language of ethnic groups. and rending development, education It gues un to examine language, of slow-learning children, education rollginn, and the arts and to confor a multi-cultural society, and sider what should be taught in multi-rucial schools.

The courses are vulldated by the The early childhood option is for Council for National Acodemie those interested in teaching child-Awards. For the unclassified degree, von between three und eight. It allendance le over three years and alms to close the gap berween good for an honours degree four years. seaching proctice and a sleep under-Students start their course with stonding of modern theories about

Students taking the honours degree do a special story of a topic of their own choice. The course is onen in qualified teachers who have completed two years' service locluding their probutionary year.

In literocy teaching. The option on They are admitted either through slow learning includes problems, an ossay based on a reading list, techniques, and research fludings about slow learners. Teachers completing this option will be able to contre.

Primary and secondary BEds

How to govern Monchester Polytechnic is planning BEd hooours degrees in teaching

Brucel University has appointed a research fellow to help construct a september. It will be designed to three to 11-year-olds and for specialnew undergraduate course in the meet the needs of students seeking lat teachers of home economics in technology and organization of the posts in education particularly in the public sector.

f choose unlis from the areas of food, textiles, hame and community.

Matura students may apply to study part-time for the course for primary teachers. They will take three years of part-time and one year of full-time work to finish the BEd and another year for the BEd with honours.

The Teesside Coiloge BEd is for the serial two years and in the final two years and year Education and the Polytechnic of At the polytechnic, the BEd and

The whys and wherefores of the West

A BA degree in humanimis, n wide choice of arts so so herin at the Cullege of Star St. John, Plymooth, in Space The college, in associated Plymonth Polytechnic, is the basis. theer-year course on the ke ntodern western culture.
It has been planted a stadents to design the

whileh is best suited to week

ests by using a modular and mont. Three modules mile struiced each year and student be oble to choose the deal specialization as well at the least the least

specialization as well as uf study.

Knglish, French, religionity suphy, geography, blasty, sociology ean be combined in ferent ways as major subjects to modude will concentrate as a few coular theme.

Students will be able to the from a variety of half module to four of these can be included to four of these can be included to long a variety of half module. the lione are degree cours. In the lift these half modules it to have the range of options and in the

the range of options will riving the range of options wide the student with skilk riving vide the student with skilk riving vide the student with special state of the relevant to other party of the Oxford Union declaring that in the option of this house hy the Council for Maionilar and short a university of the people is an elevant Awards in art and short and elevant the property of the people is an elevant that the people

Boyle's law of genial diplomacy

uppointment, however, and thes not regret the decision. "Alec Merrisan said that keing a vice-chaocollor is paying tribute to his predecessor Sir John Habakkuk os "one of the a ring way of making a living, and so it is, but I like the place and I like the work. It's friendly, and a big enough idace to be interesting. There's always more to learn." or joint habakking chairmen I have ones outstanding chairmen I have sat under", with "intellectual grass, purionee and firmness", and "a mun extremely hard to follow". During Lard Hoyle's that in guvernment, Maurice Kogan writes (The Politics of Education: Penguint, he made a substantial con-But pressed, he says he larges to promote among MPs on understand-ing of paivershies, particularly of

ing of adirections, particularly of the northern ones.

"Leadro—on only Whiteholl, has Westedaster—still does not realize what a log fraction of the total and-yersity effort is in the northern tier "Loadon—on only Whiteholl, had Westadaster—still does not realize what a log fraction of the total university effort is in the northern the small ones, although this is beginning to change a lottle. Parliamentery reports have tended to focus on the few institutions and no far from Landon, and one small iding I hope to do in an informal way is us see the CVCP keeps fairly class to Westminster as well as Whiteholl."

The task is more important of the made a substantial contribution to the exponsion of teacher supply, to the timing of the unking of the school-leaving oge, and to making compacheusive and to making compacheusive and wontered exchange compacheusive and to making compacheusive and to several schools and the school-leaving of the tribing of the compacheusive and to be school-leaving of the tribing of the compacheusive and to be s

Whitehall."

The task is more important as expertise unong purfiamentary relect committees has graven. "It is that as important to have in

tance in good repair. ".

Lord Hoyle is strongly in favour of the degartment's consulting ouiof the department's consulting out-versities mare before making decl-sions, but denies that in the past the CVCP's views have simply been ignored. It had not already had its way, but that was not necessarily because the Minister had not been symmathetic by some

With Lord Boyle, vice-chancellar of Leels Phiversity, as its new chainant from next month, the Commission next month, the Commission of Vice-Chancellars nool Principals will acquire the strange new skills of a professional politician. As a former Minister of Education, Laid Boyle brings with him experiment. And as next year is likely ta prove even above financellay for notiversities that the present, his election was perhaps a shrewd move on the committee's part.

The is nowless whoat the special committee's part.

The is nowless whoat the special contribution he cau make, however, now and the laction. "Alce Merrison of the laction." Alce Merrison wail that keing a vice-chancellor is all that keing a vice-chancellor is and significance to the nation but

other vice-chancellors as a propa-guidist for universities, "and only in terms of their economic output and significance to the nation but and significance to me nation but also for what universities mean its rultural terms". By this, he says, he means the work universities the rowords what Michael Onkeshort ralled "keeping our national inheri

The will am he drawn, however, on whether the EVCP should be taking a more active role as a spokesman for universities. Collective delikerations are more jurourian than they have over been portain than they have ever been, he says, but adds it is not for the CVCP to usurp the role of the UGC. "The UGC constitutes the Government's professional advisers where universities are concepted in the text." universities are concerned; it is not the function of the CVCP to shapli-cate that or interfere with it."

especies among purliamentary set considered has grown.

It is the important to keep in must be to "the birronets of his incontribution he will amply a set of the contribution he will amply a set of the birronets of his involvement with his own university.

A liberal in outlook, he was, a substitute of the birronets of his involvement with his own university.

A liberal in outlook, he was, a substitute of the birronets of his involvement with his own university.

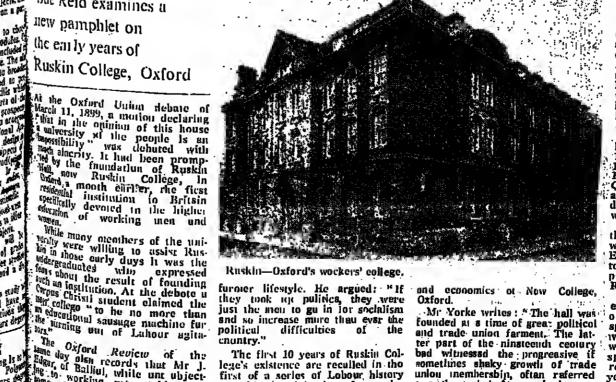
A liberal in outlook, he was, a substitute of the birronets of his involvement with his own universities.

A liberal in outlook, he was, a substitute of the was the proposal to the was the proposal to the second read and the proposal to the proposal to the second read and the proposal to the proposal to the second read and the proposal to the proposal to the second read and the proposal to the second read and the proposal to the second read and the proposal to the proposal to the second read and the proposal to the second read and the proposal to the proposal to the proposal to the second read and the proposal to the second read and the proposal to the propos



Birth and growth of 'an impossible sausage machine'

Ruskin College, Oxford



technology and organization of this doubting in closure in the section of the sec

during the first year 55 students were in residence.

attacked by pudergroductes when v sevorol Ruskin students received black eyes. The students of Ruskin

novements in their unu country."

Support for the project grow quickly. Keir Hardie, making o jersual uppeul for £1,000 for election-cering purposes in The Lobour Leader, offered "six mouths' free residence and training of Ruskin were among the most active and countries of the worker, or nominee, who callected the largest amount in proportion to the ocumbership of his noion branch. Pinsoce for the college came from Vrooman and Bearn keld the college's inoughration mooting on Rebrustry 22, 1899, in Oxford Town Hall, The First home of Ruskin vere among the most active and they were coper to put into untinty out brought with them they were coper to put into untinty were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were coper to put into untinty out brought with them they were among the most active and tracked by nuderies when severol Ruskin sev

increased by the students' renderwere in residence.

The first prospectus noted that the main courses of instruction would include sociology, logic, English grammar, industrial life tory, political history, speuking end public work and the works of John Ruskin.

But Mr Yurke says: "In its early years Ruskin was more than oresidential college. It was e wide spread educational movement which involved thousands of worker students both on, o cavrespondence has one in provincial residential holls." Over the first 10 years nearly 8,000 students enrolled with the college's correspondence in the financially difficial war years nearly 8,000 students enrolled with the college's correspondence in a contraversy



Miss Margaret Tilling, publishing director of McGrow-Hill (UK), says pre-publication orders from libraries have already comfortably exceeded those fer the 1971 edition. The company, which had expected spending cuts to reduce demand, has been caught slightly off balance and has had to re-order twice from the American printers. McGray-Hill's gushing American oales prospectus calls the encyclonedia "truly a basic reference that helongs in every school and library, and in the hume of every family that recognises the importance of having a modern science library".

However Miss Tilling says vir-tually all the 6,000 copies of the third edition sold outside the United States went to institutions and lib-rories, rather than private homes, and no attempt is being made to sell the function edition to the femily

marker in Britain.

She emphasises that it is not intended to be o work of pupular science or technology. It is essentially reference book for students from sixth forms to rescurch lahoratories and for those working in and around science and engineering.

The seles literature does, however,

Why media

studies must

professionals

The need to involve more working professionals in the fest growing erea of media atudies emerged as e

top priority at the inaugural meeting of the newly founded Media Studies Associatioo.

the Independent Broadcasting Auth-rity were emong the 25 delegates te the one-day conference at the Uni-versity of Meuchester, but the esso-ciation's chairman, Mr Philin Rad-cliffe, himself a former BBC tele-vision meducer and inversible descrip-

Representatives of the BBC end

attract

For hundreds of librarians the publication of the fourth edition of the fourth edition of the McGraw-Hill Encyclopedie of Science and Technology next week will be greeted with mixed feelings.

The 15-volume encyclopedia is the only compreheosiva reference for all science and engineering disciplines on the matket, and that appearante of a thoroughly revised and further improved version of the highly respected 1971 edition will in irself be welcomed.

On the other hand the prire, £295, will knock o big holo in the sererely restricted budgets af smaller public, college, and industrial libraries. The signs are, however, that must will feel abliged to buy it.



Jurassic dinosaur Stegosaurus.

Judged on its British rather than pedia succeeds admirably. A reader whose physics is below 0-level stundard will not get a comprehensible explanation of the way a simple electric unitor works, but those who excellent concise account of the veluped over the past 150 years. Page layout looks traditional, even old fashinned (in the best sense of the word). There is no hint of finshiness, few unnecessary netures, and the overall effect is

Media Studies Association in The THES and in his journal The Mediu Reporter, led the list of speakers, giving at up-to-the-minute report on training for the media. He recalled how in the media in the media in the recalled how he first became knowled in developing jumpolism education 25 yeers ago, with the start of the Netional Ceuncil for the Truiting of

Through the development of the NCTJ, the present system of Inden-tures, college block-releosa ceurses, tures, college block-releosa ceurses, university-based pregrammes (at Cardiff and City) and the work of the Printing ond Publishing Industry's Training Boord, Mr Brennan surveyed tha field of jouroalism treining. Ha revealed that the current PPITB survey is beleg given an oil-media breadth, ombracing television, radio, public relations and information work as well as print. the Iodependent Broadcasting Authrity were emong the 25 delegates to the cooleday conference at the University of Meuchester, but the essociation's chairman, Mr Philin Radcliffe, himself a former BBC television producer and journelist, drew ettention to the underrepresentation of the country's media organization, work as well as print.

"We have had on encouraging start with a self-identified memberahip even now of more than 100 people, Teptesanting universities, polytechnics, only the University of bedies from media programmes (at the Vision, radio, public relations and programmes (at the Printing and education work as well as print. Turning from training and education work as well as print.

Turning from training and education work as well as print. Turning from training and education of the University of Meureman of the Printing of Printing and the Printing of Centrally and Into our thinking hardly at all."

Who are the Country's media organizes of the Printing of Printing

Some deflutiona. Fer lustance he identified some of the "traditions" discussion of medie studies hed grown up; he said, based on language, indicated by the use of such torms os "affective communicatiea" and usually provided fer ortudenta following a trade course. As alternative tradition was the "liberal studies" approach, which he described as "defensive" in that it aims of the lusually provided fer ortudenta following a trade course. As alternative tradition was the "liberal studies" approach, which he described as "defensive" in that it is officed to provide at Knutsford, Cheshiro. Turning to medio studies in other, vocationally-oriented courses. Unlike the lauguage-bosed version, the liberol studies aproach encouraged discussion and speculation on social, cultural and seemietic losues, with television studies accupying an increasingly dominant role, may be a social of the principle problem as often to pupils of lower obility, the first and the principle problem as social, cultural and seemietic losues, with television studies accupying an increasingly dominant role, and the principle of the principle problem as often to pupils of lower obility, the first and the principle problem as social, cultural and seemietic losues, with television studies approach encouraged discussion and speculation on social, cultural and seemietic losues, with television studies accupying an increasingly dominant role, and the principle problem as often to pupils of lower obility, and the principle problem as sudies if only to prevent li bocombination of setting them to take part the point, however, the problem as a subject to the first and the principle problem as a subject was taught. The liberol studies approach the principle problem as a subject was taught. The liberol studies approach the principle problem as a subject was taught. The liberol studies approach the principle problem as a subject was taught. The liberol studies approach the principle problem as a subject was taught. The liberol studies approach the principle pro

sations to legal and medical instiaudoos, he told delegates.

"But the practisioners are sadly
and perhaps predictably underrepresentad. A main reason for
launching this association wes to
bridge tho gap between them and
the academica Certainly, as fer as f
am concerned, this association wes to
pite widespread support in the educational world, cannot flourish without the active participation in ito
affairs of working jouroalisto, editorg and producers."

Topics covered of the inaugural
meeting, indicating various aspacts
of the association's listerest, included the current state of professionol
treating and studies to degree status,
Con a version of medic studies hed
grown in ju caid, based on language, indicated by the use of such
route tredition was the "liberal
tredictions."

Topics covered of the inaugural
meeting, indicating various aspacts
of the association's listerest, included the current state of professionol
treating and studies to the education system, from schools to universities; the resource material being
provided for those courses by tho
Mr Ken Wrench, formerly of
the liberal of the distriction studies and
sucally provided for dudents
of the association, companion; the liberal
studies are companion; the claration and the provided for trademant of the componitory,
and provided for trademant of the DITB's
and usually provided for tudents
of the cadematica Certainly, as for as f
am concerned, this asociation, furtile to the latter in the troditool of verbal communication (linguistics, sociology, psychology).

The control of the distribution of the DITB's
and usually provided for tudents
of the sastociation of the provided for tudents
of the cadematica of the state in the traditions.

Topics covered of the insurant of treation and the polynome of the point, however,
the liberal occurrence of the studies and the polynome of the polynome of the polynome of the studies and the polynome

The second tell programme and the growing of the principal deposits and the second second second second second



Head of Pachycephalosancus.

McGraw-Hill luve un editorial advisory beard thet includes three scientists, u Swede, en Australian, end a Japanese, to give en illusion of internationalism, but 68 of the 69 contributing editors work in the Duited States.

The vast majority of the 2,900 experts who have actually critten the artirles are American too. Fer the foreign reader, this reliance on Americans has done the work little harm, since the United States has more than enough specialists to write a geod 15 volume science en-

Parochialism does break through occasionally, however. To take one small instance, few Europeans would ngree that "a new era of dental research came into existence on Jane 14, 1948, when both houses of the 80th Congress of the United Sintes passed a kill providing for the establishment of a National Dental Research fustinate as part of the National Institutes of Health ".

In view of the central nim of the association in providing a furum for proctitioners, teachers and students of the mass media, Mr Certer's revelution that his own institution, in establishing its three-year full-time diploma his communication studies in 1965, approached it by consulting 40 or 50 peopla in journalism and broedcasting, was epplauded by delegates.

Using the Birminghom experience

Using the Birminghom experience

to give o detailed cose study of how o media studies course is born, he said: "Leerning about the mesa otedia as a way of preparing for

More important, many articles on of the social implications of size plants, antinals, minerals, and so is weak—which will probably a bottler many of its users, it is personal interest that a personal interest that

on concentrate on their Americust inspects at the expense of thuse elsewhere in the world.

The list of contributors is furfrom reading "like a veritable Who's Who of modern science", as McGraw-Hill claims, but it does contain a sprinkling of entirent scientists, with eight Nubel Prize where Nutable articles include the science of the control of the whitters. Notable articles include thase by Dr B. J. Musant, directorgeneral of the Meteorological Office, on cloud physics, by Professor Aldus Sahun an fundamental interactions, and by Dr Kraffte Elicible on subtraction and systems. Ehrleke on sular energy and spacecraft propulsion.

The editors have done a gual job in ensuring that the 7,800 artiwithout ironing out all the stylistic differences that odd life and variety to o work of this surt.

According to the publishers, tho encyclopedia was being revised and up-dated throughout its production. But articles on seme ef the must rapidly changing subjects like space and molecular biology suggest that nu-dating stopped sorly last year. For example Dr Thora llasstead of Nusa, author of the entry on space bidlogy, had to write that Viking "was expected te lond on Mars in aid-1976". Tha McGraw-Hill Yearhooks of

Science and Technology, which are erass-referenced to the encyclonedia, provide e way of keeping the set up to date until the lifth edi-tion appears—which could be us sonn as 1980, the publishers say.

untably Britannica and Chesha contain some excellen scients urticles, but their coverage km The encyclopedia is a work of "hard science" and the coverage as ecouprehensive as McGas Li-

variable.
The the spest edition of Eggs, puestin Britannica currents of £415 for 30 rollings. A still still ple of librarians seemed to £415 for 50 rollings. that, at £20 per volunt i McGray-Hill Exceptionelia i is rehat expensive eren by odgir flared standards. But occ dis pronted out: "I have 10 by@ o sical Abstracts, and that tous

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Bipedaf curnivorous savint

The head of enc of British science libraries said his sale

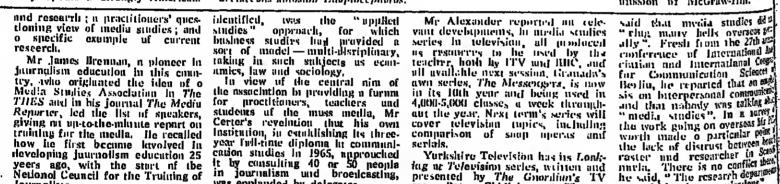
formd post editions of the predin very aseful, as a star

know where to begin resead a

jects, as well as a source unsivers to specific queries

The hig general encyclose

Mettrum-Hill Encyclopeδα Science and Technology, Ω5 Pictures reprinted with kits



Yurkshire Television has its Lonking of Television series, written and presented by The Gnordina's TV man, Peter Fiddick, und Thames ere producing The English Programma, which will be cuvering TV dramo.

Filling the role of the professional doubter with some conviction, Mr Jeln Tweedie, who has come vin The same was true in some observations. The same was true in some observations. Significant instance, Nigetic instance,

fluence of the Autrican medi-studies industry—to be seen for so ourple, in Axia and the Middle fact Certainly, in the United States for trailing was taken much mete set

Philip Raddle

The outhor is information slike Munchester University.

Summary of a report by Alan Gordon and Gareth Williams on the attitudes of fifth and sixth-formers to school, work and higher education

What do you want to do when you grow up, son?

In 1975 Lord Crowther-Hunt, then Minister of State at the Department of Education and Science, instituted en luquiry into the atti-tudes of 16 and 18-yeur-olds to the educational and career oppurtunities open te them and their intentions after school or college.

THE TIMES HIGHER EDUCATION SUPPLEMENT 1,7.77

In setting it up he reported that five-sixths In setting it up he reported that five-sixths of the drap in the estimated number of stadents in full-time higher education in 1981 from 750,000 to 640,000 was due to lower estimates of the minober of pupils staying on in school or further education beyond the minimum school-lenving oge, and one-sixth was due to lower estimates of those qualified and willing to go on to higher education. The DES forecast of 640,000 students has subsequently been reduced to 560,000 although the high jurenilo unemployment of the past two years has increased the propensity of young people to cootinue their education.

The study consisted of interviews with 806

young people to cootinue meer education.

The study consisted of interviews with 806 fifth formers and 1,986 sixth formers undertaken by the Office of Population Census and Surveys and an onalysis of these determs and cordon of the Institute for Research and Development in Post-Cootpulsory Education at Lancoster University.

The nim was to interpret the apparent decliur in interest in post-compulsory education in the light of pupil's own attitudes. In addition to examining the effects of social and educational background, the study broke new ground by exploring the hypothesis that perceptions of the economic odvantages of different courses of action ore so important consideration when young people are making ensideration when young people are making educational and career decisions. Although this assumption has formed the basis of much of the economics of education that has developed since 1960 It has not previously been examined in the form of the direct questioning of the pupils concerned.

A preliminary report was submitted in the DES in November, 1975. A summary of this report was published by the DES in July, 1976 as 16 and 18 Year Olds: Attitudes to Education, Na 86 in the Reports On Education series. The final report to the DES has now been completed and the authors are rurently preparing it for commercial publication. The report contains the results of the two surveys, a review of emilier studies. the two surveys, a review of emilier studies in this area, and an examination of trends in the demand for higher education in Western Fundament

Make findings of the fifth-form

Nearly two-thirds of the boys and over half the girls said they would leave school as 5000 os the school year was over. Among the fifth-formers about a third of the luys and a quarter of the girls formed a group who claimed never to have emisilered stuying on beyond the minimum achool-leoving oge. At the other extreme a third of the boys and over two-fifths of the girls hol definitely decided to centime their full-time sources and over the state of the girls hold definitely decided to centime their full-time siducation, either at school or at college.

This left about n third of boys and girls who may be considered susceptible to influence at or near the end of their compulsery oducation.

TARLE 2

A-level scorea, by category of higher education institution preferred

One io 10 of the hoyo and 14 per cent of the girls were planning to centinue their full-time education in further education ofter transferring to another institution ovar half bot available at school. Just over o third tid of certain asnects of their aecondory certain aspects of their aecondory

CE and CSE allempts and passes

theel intections but there are some impor-ting discrepancies. Occ in 10 of the buys nearly a quarter of the girls who

About one in 10 of the sample had found nothing useful in any discussion or reading asked for the single most useful source of higher education institution asked for the single most useful source of advice and information, 18 per cent of pupils hoping to go on to higher education below of the free ducation institution.

Boys Girls

Boys Girls

Boys Girls

Boys Girls

Some languages of the ducation institution asked for the single most useful source of advice and information, 18 per cent of pupils hoping to go on to higher education picked out immediate family, 13 per cent of institution (table 2). The appropriateness selected friends end other relations, 13 per cent of the institution of the institution in tan always 80 to higher education later 80 to higher education later 80 to higher education later 80 l Applying for higher education is to complete ted. More of my friends are going on to biguer education 13

achieved five or more passes at GCE 1Grades A, II, C) or C5E grade one intended leaving school at the end of the fifth year and going out to work.

Fifth-formers who intended leaving school but continuing their studies full-time at a forther education or technical college did much less well in their examinations than those staying on at school. Although only 11 per cent of the sample planned to this t89 pupils 1 over 80 per cent of these passed four or fewer subjects in GCE are CSE grade one. In fact ohom or brief guined the passes at this level in all.

Social background and educational inten-

Previous studies hove shown a strong rela-Previous studies have shown a strong relationship between e pupil's propensity to continue his studies beyond the minimum schoolic pring age and has or her home environment. This study confirmed that these influences continue to operate; the higher the sucial-economic stetus of a child's father the more likely is the child to expect to stoy at school after the authoram leaving age. One way in which this comes about is that pupils with fathers in non-numual occupations faired better in external examinations than their classmates from the manual secial one in 10

Altitudes to mointenance grants for 16 to 18-year-old pupils

Those pupils leaving school for work after the fifth form were asked whether they had heard of the discretionary ewards that Local Education Authorities can make to help a young person stay on after sixteen. Just over a half of the leavers said they had heard something of these grants.

heard something of these grants.

Just under a third of all leavers said they would have considered staying on at school or college if a grant had been available. When asked the level of grant that would make then decide to stay on half of the possible stayers gove on amount of £10 or less (worth ubout £14 et 1977 prices). This would suggest that recent proposals for grants for staying on in education could have some impact in reducing the number of corly leavers by nerstading young people to stay on it school persuading young people to stay en la school outlier than join the dule queues.

In comparison with earlier studies of this kind, a higher proportion of pupils appeared satisfied with the cereera advice they had been given than was expected. Even so 35 per cent of the loys and 45 per cent of the loys and 45 per cent of the loys and 45 per cent of the girls felt they had not had enough help, advice and information to deciding what to do ofter the fifth form. The greater dissatisfaction onning girls echees the findings of previous research. previous research.

tivford and Cambridge
Old civic universities
London University
New universities
Scottish universities
New civic universities 4.8 4.9 4.1 7.1 3.4 4.4 3.2 3.3 0.9 3.3 Tea per cent of the pupils had not entered life by CSE or GCE examination and a form of the portion and a form of the portion and a form of the portion of the control of the pupils had not entered life to obtain any GCE grade one masses. Examination as Grade A=5, B=4, C=3, D=2 and E=1. Thus a score of 11+ is BBC and the equivalent or interest of the control of the

All these indicators showed a relationship between propensity to stay on in school and perceptions of the economic beactits of doing so. However outlivariate analysis showed that they were also closely related to other factors such as family background and attitude to school. Whils this survey has therefore opened this topic up, potentially fruitide as a lino of research, it has not demonstrated definitely that perceptions of economic benefit are influential in decisions about staying on at school.

Main findings of the sixth-form

Intentions of sixth-formers

on way in which this comes about is that hunders with futhers in non-manual occopiations faired better in external examinations that their classmates from the manual secial classes.

Again, those pupils that have at least one parent who stayed on after the minimum school-leaving one are much more bikely to be staying on themselves than pupils whose function both left school fer work at the cud of compulsory education.

A levels in further education

A levels in further education

Pupils studying for their A levels in further education were asked why they had riosen to continue their full-time education in this way. For a substantial number of boys and girls it was because their school did not do A level er did not offer them to the subjects the pupils wanted to atudy. However a lerger number, especially ameng the girls, were dissotisfied with school for other reasons including a third who felt they would be treated like on adult at college and a further 19 ner cent who wanted a co-education. 19 ner cent who wanted a co-education

A level ettempts mid passes

The most conteton number of A-level sult-The most conteton number of A-level suitects being token was three with 57 percent of boys and 53 per cent of girls taking this number. On average boys took rather more subjects the girls. Boys in comprehensive and direct grant schools were particularly likely to take feur subjects: This was because, in this somple at least, the general studies poper was almost cenfined to these two types of school.

Pupils from direct grant schools were con-

Pupils from direct grant schools were considerably more likely then others to obtain good passes in their A-level examinations.

Over 50 per cent of candidates from compressions and a state of the sta hensive schools obtained on A-level score thet would not nermally qualify them for entry

Enjoyment of the subject was by far the most frequent reasen given for selecting e particular subject at A level. However, the sciences (including economics) were less likely to be taken for reasons of enjoyment and more likely to be taken because they are felt too be "usaful for a job". In addition pupils studying sciences did not feel they were particularly good at the subject in comparison with pupils studying other subjects. In spite of this pupils who took sciances at A level obtained on average higher pass marks than those who took non-science subjects.

Reasons for logving aducation at 18

The 17 per cent of boys and 15 per cent of girls not intending to enter full time higher education straight from school or college were asked why not (tobie 1). The fact thet a place in higher education could be obtained later on, being fed up with oudy-ing, career considerations and the low level student grante attracted most aupport.

Perceptions of economic advantages of post controllarly education

Three methods were employed in on attempt to assess the monatory advantage, in terms of higher earnings later en, from cootinued education as perceived by the list intermed to assess the monatory advantage, in terms of higher earnings later en, from cootinued education as perceived by the list intermed to stay of the dopartiment. However, in their own of the most important reached education as perceived by the sedection. Two of the most important reached earnings are anticipated by these institution had been important in their own sedection. Two of the most important reached earnings are anticipated by these objects of possible reasons for the choice of institution. At the top of the fifth-form list of possible reasons for the choice of institution. At the top of the fifth-form list of possible reasons for the choice of one choice of institution. At the top of the fifth-form elso are those who definitely intend to stay on ot school.

Autitudes of fifth and sixth-formers to school, work and higher education by Alan Gordon, more highly than elmost any other factor. For the choice of Oxford and Cambridge uni-

versities several items were considered ordered inflorment—the liveliness of the students, the relations between staff and students, the sucial life and above all the reputation of the institution itself.

However, elsewhere only the reputation of the old civic universities and the prospectoses of the new universities were considered more important overall than the perceived use of the chosen coorse from the point of view of a future career. The fact that students at a particular iostitution were perceived as being politically active attracted hardly anyone anywhere. hardly anyone onywhere.

thardly anyone anywhere.

Thera were substantisl differences in the A lavel performance of aspirants to the different cotegories of higher education institution. Oxford and Cambridge Universities were overwhelmingly the first preference of those who subsequently do well at A level. Aspirants for the other universities were some way behind with these favouring the old civic universities leading the field choad of Lombun University and then the others. Pulytechnics and ather further education colleges were the first preference very largely of those who subsequently do badly et A level and the performance of those who subsequently do badly et A level and the colleges of education was very paor indeed, as Table 2 shares.

Career aspirolions

The majority of 18-year-olds had a particular career in mind—52 per cent had definitely decided what they would like to do and 28 per cent probably. Gu's were more likely than boys to have a firm idee of what they wonted to do. The fact that four-fifths of the young people laterviewed were able to express a fairly clear iden of what they wanted to do easts some doubt on the widespremi belief that large numbers drift into higher education through inertia.

Girla on aversge had lower coreer aspira-

Girla on aversge had lower coreer aspirutions then boys, although there was no evidence to soggest that sixth formers from or forther education colleges have less ambition than nupils in direct grant, independent and grammur schools.

Coreer advice

Coreer advice

Ilolf the boys and ever bulf the girls questioned felt they had not had enough help, ndvice and information in deciding what to do after A levels. Again, while this is high, it is somewhat less than one wanted expect from corlier research on this subject.

In terms of useful sources of information, teachers other than coreers teachers were specifically mentioned as the single most useful source of odvice by 23 per cent of pupils. Twolve per cent found the careers teachers most helpful and e further 12 per cent specified friends and ralottoos. Impediate feelig were alagied out by 9 per cent and the careers officer by 7 per cent. Sixteen per cent of the boys and 17 per cent of the girls riniued to have found no one of nothing at olf of use.

Perceptions of economic benefits of higher education

An attempt was also mede in the survey of sixth formers and codlego of further education arudents to quantify in some wey the banefile, in terms of higher salaries later ou, from carrying on with full-time aducation after A levels. Table three compares the anticipated earnings at 26 of borit the 16 and the 18-year-olds.

Mediona of anticipated earnings of 26 by intentions at age 16 and 18. E

Category 1d-year-old stayers
1d-year-old feavers
1d-year-old part-fine study
1d-year-old definite stayers 16-year-old probable stayers
16-year-olds going to full-time
furthes ethication
16-year-olds going to part-time
further education 2704 1924 16-year old loavers

The anticipated earnings at 26 show an interesting pattern and conform fairly closely to the predictions of the hypothasis that those expection to stay on at school after 16 and those intending to proceed to higher education anticipate financial rewards from so doing (even if these rewards are not the explicit reasons for coordinates in full-time education). As obown in table three the highest earnings are analcipated by those 18-year-olds who expect to go on to higher education. At the top of the fifth-form list also are those who definitely intend to stay on ot school.



Forthcoming events

Chairs

bety at the university.

Dr Graeine Dnyles, at present lecturer in the University of Cambridge and fellow of Si Catharbie's College.

Cambridge, has been appointed pro-

Appointments 1

Universities

Aberystwyth Tutar: Mr Wattord Gealg fextra mirral

Durham

Durham
Second pro-vire-chancellor: Protessor
J. L. Brooks (reappointment for three
pears). Chairmen of hunds of studies:
Professor H. Smythe (law—two
years); Professor T. J. Willinore
(mathematics—two years); Professor
P. Altrans (sochology and social
administration—one year). Deputy
deno: Mr. J. L. J. Machin (social
sciences). Lecturers: Cotto Haselgrove
(archaeology); John Ashworth and
fean Evons (contomics); Raymond
Harris (geography); Susan Christle,
Michael Forde and Geoffrey Howder
flaw); Robert Delainmly (philosophy).

Leede Lecturers; Aniol Y. Beaini and Dennis Flannery (psychlatry); ltarry Clemmey (earli sciences); Eric Dickinson (food science); Borry Hames and Stepheo Higgins (blochemiatry); Susau MacGill (geography); Bruco Portridge (management studies); David Taylor (education). Temporary lecturers: John Esilog (phonetics); Anthony Hallibuy (philosophy). Research, fellow: Richord Henderson (inorganic and structural chemistry), Temporary research fellow; M. G. Segui (Inorganic and structural chemistry). Lecturers : Amol Y. Beatul and Dennis

Newcestle

Newcestie
Visiting 'professor: Professor Murk
Visiting 'professor: Professor Murk
Nameroff (neorology). Reoder:
Michael Downing (londscape design).
British Heart Foundation Clinical Lecturer: R. W. F. Campbell (medicine).
Lecturers: D. J. Ellintt and M. J.

director of the Brain Metabolism Unit in Edhiburgh, has been appointed to the chair of psychological medicine and to the headship of the department of Ar James Alchryre, at present scriftle manager controlling research at 1Cl. Fibres (Harrigate), has heen appointed to the chair of psychological medicine and logithe from the department of textile industries in the department of textile industries at Leeds University with effect from Cotology 1, 1977. He succeeds Professor Charles Whewell who is retiring this year. Dr. Peter Banks, at present sentor Mr Murtyn II. Harris, at present it octurer to the department of life reader at London University, has been chemistry or Sheffield University, has appointed to the chair of electrical licen oppointed professor of blocken-

> Jackson (cled engineering). SRC scalor visiting fellow, Professor C. Hessiga (mathematics).

Sheffield
Promodors to some heather: K.
Barker: relectronic and electrical
engineering; P. R. Beardsell and A. A.
Heatheone (Hispanic studies); E. Bourh
(applied mathematics and computing
science); R. Brook inicialingsy); G. H.
Cope (human hisbody and anatomy);
C. O. Carris and N. J. Super (geology);
T. T. Elkington (hotany); P. C. Engel
and M. W. Fowler (bluchentistry);
A. M. Fleathing (prehistory and artimoology); E. M. Jacobs (contonic and
social history); J. Jeliuek (Japanese
studies); P. Lasel (Germanic studies);
R. J. Parsons (observes and genaccology); P. Polak and W. A. C. Swift
trucchanical engineering); W. Rowithson (education); J. W. Tucker
libysics); R. Underhown (economic
studies). Lecturers; D. P. Edwards
fundialing science); B. J. Rowlands
(surgery). Temporary lecturer: S.
Tuvare (probability and statistics).
Houglas Kump (escarch felling in
economics: B. R. Lyous, Part-time
honorary clinical tecturers; P. G.
McAndrew (demia) surgery); G. P.
Husking (paediotrics); Mrs E. H.
Tuvner (venereal diseases), Part-time
honorary clinical tecturers; P. G.
McAndrew (demia) surgery); G. P.
Husking (paediotrics); Mrs E. H.
Tuvner (venereal diseases), Part-time
honorary clinical tecturers; P. G.
McAndrew (demia) surgery); G. P.
Husking (paediotrics); Mrs E. H.
Tuvner (venereal diseases), Part-time
honorary clinical tecturers; D. R.
Le Suge (arts); G. Susan Phowight
(law), R. G. G. Russoll (medicine).

Welsh National School of

Director and denn of postgraduate studies: Dr D. H. Makhasun.

Polytechnics Northern Ireland Bleads of schuols: Mr B. W. Langlands Bleads of schuols: Mr B. W. Langlands

weekend sembor with dancing, mask, and singing by artistes confing from India for the Sanskelde seventh feature, will be held on Inty 2 and 3 at the Polytechnic of Central London, 115 New Cavendish Street, London WI, Fee; 112.00, Further thanks from Notic Seedlow, Store Conse. Dale

The annual conference of the Society for the Social History of Methelite will be held from July 8-10 at New Hall, Cambridge University. Mr Erle Gaskell, Ilbrarian at the EFC's central llibrary, will give the presidential address "In praise of relativity". Fee: £22,00 for full board, student rate £18,00, visitors £4,00 and £2,00 Forther detalls from Dr. L. J. Jordanova, New Hall, Cambridge CB CHF.

The annual oniversity wardons' confec-ence, will be held at Lopes Hall, Oniversity of Exeter, or July 12-14 Further details from Dr D. E. Highes, Helberlugton House, Durvard Halls, Argyll Ruad, Exeter EX4 4RG.

Grants

Warwick
Engineering—Professor R. P. Johnson
—117,400 from the SRC for research
on the Influence of the flexibility of
joints on the strength of composite
framed structures; £15,470 from the
SRC for research on properties of shear
connectors for composite beams,
Environmental sciences — Professor
It. P. Kelly—£10,569 from the SRC
for research on metabolic transitions
letween outologide and heterotrophic
physiology in laculitative libidiacilif,
Physics—Professor P. N. Butcher and
for J. R. Horker—£14,890 from the SRC
for research on the theory of electron
trousport in amorphous semiconductors. Warwick

Sheffield Extramurel studies—£22,655 from the SSRC for research into the effects of the TUC, BBC, WKA Trade Union Studies Project 1975-1978, Chemistry—£21,000 from the SRC for research into synthetic catalytic and mechanistic studies in arigono-transition metal chemistry; £31,500 from the SRC for research into magnetic field effect on schriftlation pulse shapes; £10,300 from the SRC for research into synthetic cycloderin analogues. Physics—£30,615 from the SRC for research into luminilies energy and imparity states in amorphous silicon and related materials; £14,135 from the SRC for research into dain analysis on the LAMP experiment.

Sheffield

"New parterns in science education", a symposium organized by the Farulty of Science, Sheffield City Polystechule, in assaciation with the education divident of the Chemical Society, will be held at the polytechule on July 12. Fee: th.50. Further information trood the Science Farulty 10ther. Sheffield Pity Pulytechule, Pond Sivert, Sheffield Si IVB.

"Education in communication windless", a one-day senior organization of the Communication, when a she held on July 19 at London Size held on Ju

"Education for the future II the challenge", a one-day conference at firational University no July 12, will confine the discussions on Interdisciplinary studies startest last year, Epribed details from the Information Officer, Dulversity of Bradford, West Vorkshire 1007-1109.

"The hearing-impaired student in ser-tary education", a seminar organized by the Nathual Bureau bu. Handirouped Students by association with the Royal National Institute for the Deal, at the King's Fund Centre, 126 Aftern Street, Landon NW1 7NF, Fee: t.4.00, G.30 for students, Details front NIHIS, City of Landon Polytechnic, Old Castle Street, Landon El 7NT.

research haro precipitation of diagene-tic carbonates in sandstone and must

the carbonates in some strings.

Physiology—£18,731 from the ARC for research into detary influences on absorption mechanisms for authoracids in the lowl.

Beadford

Beadford

DSc: Professor Jean Pad Rec. physics, University of Paris.

Electronic and electrical engineering— E19,040 from the SRC for research line the applications and limitations of charge transfer devices. Holmby-C16,497 fro milk: VRI' for te

search bito physiology of durable resis-tance to, and function in har-toris of rust fungl. Chemical engineering and fuel techno-logy—f. 6,000 from the SRC for re-search into the development of diag-nostic techniques for imasurement in practical combination systems using a double pulse laser; t. 10,124 from the Department of Kircleonment for research on proof fires in a cross what,

nobiro.f Oneen Mary College

Acronantical Engineering—for H. P.
Horton, Chileton the SRC for work on longitudinal curvature effects on angersonic turbulent houndary layers with heat transfer: Professor A. D. Young, C17.110 from the SRC for work on three-dimensional tachnium houndary layer separation. North London

Hirlingy--- (26,500 from the SEC for the command of experimental tield by Patricia Santinelli work hate the evolutionary dynamics of variation males of collin manages. and Pauline Downs

The Mathand Book League has according a special contenence on large at Hollman Library, Theology, he Will. It will examine law 2022, therefore are cording with resonant tonders in the late 1970. Farbard outs from Stanley Jockson Mi. Albemayle Street, London Wil 42.

Acress to indomnation a large summer seminar organized by the partinent of library and glorady and glorady and the condition of Liverpool Polytology to be held from July 11-22 at a procedure. Further details has be formation Snules, Liverpool Education of Library of the Three barn Snules, Three barn Snules, Liverpool Education.

Honorary degrees

D'rech : Dr Robert Marts, & Murray Associates, consultant to copyrious I health and hygine MA: Coincillor Frank Illia, i Mayor of Bradford 1976-77.

DSc : Professor P. Hall, Silden fessor of pure mathematics, Co. Hulversity, 1953-67.

MA: Mr II. Douly, senior figurers by III. Douly, senior figurers, National Association of F. Chiby; Mr A. Rose, head and John Gulvon Junior School, fact Cotocillor A. J. Wangh, make Nat. Covenity City Conneil since Nat. 1945, Lord Mayor of Covenity by the first part of the Covenity by the first product of the Covenity by the Cov

Noticeboard is compiled

lenvironmentol sciences); Dr Brown (life sciences). Open University programmes July 2 to July 8

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Saturday JHy 2

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10.20 Mechanics and Applied Calendary (1926)

10.40 Mechanics (1926)

10.40 Mech

0.20 History of mathematics Newton and the Calculus (ANALY) ploof 5. RAOIO 3 (VHF)
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ence mey ha given to applicente who heve, or are eligible for, membarship

'Marxist bias' and the Centre for Contemporary Cultural Studies

Applicatione are invited from both man and woman for panalonable poels in the Department of Agriculture at Loughry College of Agriculture and Food Technology, Cookstown, Co. Tyrone, Northam Ireland. The work involves providing training in Human Communication for people working within the Agriculture and Food Industriae, eg. In Education (formal and extension) and marketing. There are four main programma areas in the Department: Formal training Including a poel-graduale course leading to a Diploma awarded by Quaen's University of Bellael; induction and in-assiste training; advice and development; and research:—

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Ralavani work exparience, particularly in the agriculturel end lood processing industries, is desirable.

LETTERS TO THE EDITOR

MAINSTOIRS and the Centre for Contemporary Cultural Studies

as Ar whenevers of the centre for party series of the centre for the property of the witchburing rendered by many series of the centre for the filter chemistry for the centre for the filter and the centre for the filter and the centre for the filter and the filter and the centre for the filter and the filter and the centre for the filter and the filter and the filter and the centre for the filter and the fi or eight volumes), all judged worthy of publication, about to fullow.

Mr Watson's judgment appears to he hased on an issue of nur fournal. This is, as is plainly stored, Norking Papers, designed in expose ongoing work of an early stage to the interest and criticism. The fact that one contributor to issue number 9 declared a certain line of inquiry to be "floundering" is judged as a sign of lins, of actification on the office of inquiry to be "floundering" is believe research into such complex metters as cultural history to be a matter whose outcome is predictable before the research is done. We believe, on the contrary, thet it is loportout, for the development of the field as a whole, to say openly when kness of inquiry have not been found to be useful.

But, for Mr Watson's information our Journal is not, and lins never been, an official university publication, is not supported by either university or public funds, and hus indeed been launched and sustained by independent publicolion. I venture to suggest that it has had en academic impact quite out of fine with its modest print run and relutively untstable financial brain.

deed been kanched and sustained by independent publication. I rendered to suggest that it has had enacademic impact quite out of fine with its modest print run and relutively unstable financial basis—as felicity is clear from Raymond Williams's reriew of number 10.

In fact, spert from the normal In fact, spert from the normal stolent grants, three echdenic and one secretarial salsry, and the centre's overheads, we have had remarkably little public funds, either to use or misuse. It might indeed, he rhe subject of "inquiry" as to how and why a centre, which has been immensely productive in the course of its existence, has meneged to he so with such reletively little public support.

f doubt, however, whether Mr Wstson is really interested in the

discuss.

Fortunately, we have grester respect for and confidence in our university's capacity to tolerate the problems involved in advancing serious criticel knowledge of our society end culture then Mr Wetson has. Of course, if his attempt to trigger the university into punitive action egainst us foils there are always alternatives open to him. He could stop buying our Journal. Or he could etart burning some heretical books. cal books.
Yours feltlifully,
STUART HALL,

Director, Centre for Contemporary Cultural University of Birmingham.

Sir,—I em dismoyed to see nu ntack by J. C. Watson on the intel-lectual integrity of the Centre for Contemporery Cultural Studies.

Contemporery Cultural Studies.

I here no doubt that the centre is quito copable of disposing of Watson's offact. What really warries me, however, and I am sure disturbs many who are not Marxiste, is that a responsible journal of informed opinion like The THES should lisely descend to the gutter-sulpe level of publishing and therefore giving crodence to witch-thunling emean factics.

I for one here never heard of

Sir,—We have followed the debote in The THES on "Marxist blue" within sociology departments end the Open University and have noted the increasing number of newe storice you are carrying on this topic.

not moved beyond a Crude and JOHN HILL, PETE McGAVIN, touching faith in scientistic "objectively" and that British accologists

University of York.

do ant read books on the sociology uf knowledge, The low level of this debelo is

I for one here never heard of Wetson before. But If he does have conscibing to any about the role of the centre in the development of cultural studies, let him make his case in a reasoned manner, although judging by his letter he may experience some difficulty in doing so.

CHARLES WOOLFSON, Department of Social and Economic Research,

The low level of this debelo is not e purely academic scandsl. The Bernfsrerbot now operating in the Federal Republic of Cermany was in part rendered possible by the dissemination of precisely the sort of ill-informed mul arrogant professional ottlinde we have eeen displayed in your columns.

"Msrxist sociology" ie not a dogunatic nonolith, but contains a wide runge of highly differentiated nor spective on the analysis of modern society. Marxist eoclologies of various sorts have meda on important and powerful intervention in the recently renewed theoretical debate which sociology, and it is only proper than they should be strongly represented within departments of sociology. We do not read of "ethnomethodology. We do not read of "ethnomethodology is strongly represented in many sanciology departments. It makes no more sense to speek of Marxist blos then it doee of a blee towards any other theoretical tendency within sociology.

A cynical observer might be

sociology.

A cynical observer might be forgiven for thinking the it ie practacly the strength cod variaty of Marxisl sociology which has led

storice you are carrying on this topic.

It seems to us dicturblog that your correspondents, among them professional eachologists who allouid know better, have seen fit to use the mot eccusations of "bies" be the final resort of profassional eociologists who allouid know better, have seen fit to use the mot eccusations of "bies" be the final resort of profassional eociologists who have eeen thair claims to authoritative enalyse and accdemic pressign that British sociology has pressign that British sociology has not moved beyond a crude and

Job protection

Sir,—Your leader, "How much security?" (THES, May 27) tends to perpetuate the myth thet a two or three-year probatiooery period bas some legal force.

Under the Employment Act, persons may only be dismissed within 26 weeks (inclusive of notice) of the commencement of their employment without there being reasons which would satisfy an industrial tribunal that they had not been unfairly dismissed.

The termination of the commencement of their excepted "permanence". The problem is therefore of their accepted "permanence". The problem is therefore of entire problem is therefore of their accepted "permanence". The problem is therefore of entire problem is therefore of their accepted "permanence". The problem is therefore of altitude—there must be recognition by both unions end omployees that although the Act affords them problem is therefore of their accepted "permanence". The problem is therefore of their accepted the problem is therefore of their accepted the problem is therefore of their accepted "permanence". The problem is therefore of their accepted the problem is therefore of their accepted "permanence".

The termination of the eppointment of eri academic after two or three years' service, even if it is termined "probationary", would have to be for reasons far more cogent then the non-production of research University of Newcastle upon Tyne.

papers or "poor teaching nbility" if il were not to be liable to be challenged es unfair dismissel. Acodemics Ilierefora are no woree off blian any other acuployees hut

on the contrary have the odvantage of their accepted "permanence".



Bridging the great divide

More than 50 years ago, Earl Russell, in a collection of his work uptly entitled to Proise of Inteness. wrote an essay extalling the ritines of useless knowledge, in which vucazional training was scathingly dismissed os "tuility education". The main theme of Russell's

argument, later embraced in sume extent by Lord Robbins, was that the universities and colleges, by producing lets more gradumes—particularly in those subjects with a strong cultural connectation—provided a civilizing and humanizing influence of benefit to society. Buth Russell and Robbins subscribed to the article of faith which implicitly suggests that an increased propertion of qualified manpower leads to a corresponding increase in national the universities and curleges, by

This may be teue, but despite the fact that only 40 per cent of tique management in Britain has a degree of eny sort—ns compared with 80 per cent in Germany and 90 per cent in France—thece is a strong facility that the proposition's colors. feeling that the population's educa-thous attainment is exceeding joh requirements. It is not so much the total number of graduates that is important, but rather their quality and the section of the ecotiony to which they choose to sell their skills.

/ What abould be ilone? Notwithstanding the contrary view of the anti-menpower planning lobby, it is not difficult to direct more graduates loto industry and commerce. What you connot do, however, is make them like it.

The problem is twofold. First, our univecalties and polytechics must produce more trained people who ere of immediate use to indusmust ottenut to provide their stu-dents with come insights and prior experience of the industrial society

The sandwich course is the tradi-

Michael Hussey discusses a scheme at Aston

University for combining teaching and research with industrial experience

tive of their rule in society, through the more pouction technological economics course at Striling, in the down-to-corth. Integrisciplioury. Higher Degrees Scheme or Aston University. On the narrower from of engin-cering and opplied science, the Boelock Report has led to consul-

and Manchester Polytechnics,

osked to pay a fee—currently £300 of a network of collaborating puly-a year—which helps offact the extra east of running an action rescurch scheme and also serves as a token of the firm's commitment to the pro-

influstry-based higher degrees as jett, superrisor, and university, port of their graduote training pro- On the stuff side, fundamen

Safeguards as to the confidentiality of commercial information usually need discussion at this stage. Above all, if the collaborative exercise is to praceed with a high level of participation on both sides, then it is important that the company stansors a nice of work to which they really need an answer.

The student may also suffer from the lack of a sense of technique mywhere in particular, since half his time is spent in the firm and the rest in a number of university departments. Lack of easy access to supervisors, apparent lack of a clear project definition, perhaps the absence of a "correct" solution when compored with a traditional PhD all bring extro pressures to

Problems for the university include the assimilation of an opera-thmal proldent-solving activity--darlon of total rechnology pro-grammes at Astun, Lancaster, any—into the right departmental Loughborough, Stirling and Struth-clyde Universities and Shefficht and deounds on supervisors' time and deounds on supervisors' tim

inynlred. Most of the abuve schemes are lased on an MSc ul taught coorse work. Research comes later, some times on a problem generated by an ontside body.

Aston is an exception to this, in that all his activity is directed to problem-solving research. The IIII) achieved is run by four thora who wisht firms to set up projects, and then recruit students to curry out the problem-solving. The etudont sponds about half his time in the company and the other half his time in the company and the other half his time in the company and the other half his time in the company and the other half his time in the company and the other half his time in the company and the other half his time in the company and the other half his time in the company and the other half his time in the company and the other half his time in the company and the other half his time in the company and the other half his time in the company and the

could be saved, for exemple, if such scheous were argunized on the losts

scheme and also serves as a locular of the firm's commitment to the ject. They also contribute to the student's expenses.

It might even be possible for some studenthing to be owneded companies view being able to choose their own problems.

Barbara Hardy reviews last week's Radio 3 colloguy on the work of Gerard Manley Honkins

Warp but no weft in an academic phone-in

nerve of gendine thinking, Geoffine Hill meditored showly and serious on what he suggested was Hopkins new show meditors of attention, by attention, graphic recognition, by

need to meet or core deviations and distractions to man's state of

time and space. Here was the pulse of the mind, hesitan, irigo

lar, geigoing, relaxing, musing e-possibilities.

Thinking more rapidly, sub-dently and roughly was John Win questioning the runine housest

all this then?" tade, and reners as of the paet's common har.

of work, sex, art and solitude

he did not lose the indidate of the past for a minute, add-

uncommon sense of language l ng, and literary history.

He was, happily, allowed to ed the programme, and Rich paist his power, while handing ore fee his awa cuctailed defreece p

powers, though liberated on

small region, were massive of highly original in the control

that nineteenth-century osellifor

ness which was not much refer

by Bricwoing's amosing roughest Others builless time for these

and thinking. Wallaco Rober-

alux-had a mere cuminative sat

elegant lucidity was not into sively exercised by the subject prosonly and Duns Scotus. Gda Surrey was allowed a rare man of protest, following a general remark by Puddy Kitchen of

subject of unknown engli

the paet's fine, delicate against of himself and his hazards.

Perhaps Paddy Kitchen said to patronize Hopkins's passional self-knowledge, as biographers of horacter of the absence bere of the powers. Speculations about Hopkin

if they do not look and lear for the meet's painful and caled checidation of what he cale "Terling, and love in pariety."

Let us not leel ino pleased abo

nitusnally strong sonsuouse includes and extends our case

tions of desire, praise, potest and suburdission. He is not a

ignerant nr starved celibate, but highly sexual poet.

It is beside the point to start argaing with the contributors who should have been allowed to remain the contributors with the contr

the tiny Wain his

iny iccluming blandess Insisted that Hopki

mi-miniscrise commonscrise

eculations in a solutory, "Web

It is easy for academics to deplace radio conversation. Experts are reduced to amateurs by speaking subjects. Amateurs do not seem to know they are amateurs, in the conversation of the voices, by the say to the conversation of the voices, by the say to the conversation of the voices, by the say to the conversation of the voices, by the say to the conversation of the conversation of the conversation of the conversation of the voices, by the conversation of the voices of the voices. Strangers are made in feign inter-bertual infinmey. Pundits are con-bertual infinmey. Pundits are con-bertual infinmey. Finding are con-bertual infinmey. Pundits are con-bertual infinmey. Pundits are con-bertual infinmey. instant wisdom.

But the most westeful programme ictrays the clerks themsetyes, pro-cessing knowledge, sensibility, devo-son and thought into blandness. This probably happens over a whole range of subjects, with some damage to the frail image of academic community. The arts are especially vulnerable, for good and ball reasons, as was plain in Radio Three's discussion of Gerard Manley Hopkins, "How Meet Heanty". irnailense last week.

We heard a conversation con-acted by Hallam Tennyson and Christopher Ricks, wined by a large and impressive group of paets, scholars, and critics who could have been united and fired by their promisingly difficult yet accessible subject. Hapkins's studies have lightled with problems, real and imaginary, since he made his delayed appearance in 1918, a Vicurian disguised us a modern, to shock and inspire madernist poetry by his intrassioned compressions

and dislocations.

Despite difficulty of style, form, and terms, Hopkins is more com-monly appealing, I believe, than nost other modern poets, more directly stirring our passions and senses than Elint or Pound, guaranreed to mice livers of portry in suite of those drugons of inscape and spring rhythm. His life tas always prayoked disagreements, though by move the gaps, silences, reserves, and powers ought to have started reasing us out of conventional speculations about religious sacrifice, repression, and

numosexuality.

The cuntributors touched on all these, and other, problems, without enough argumem and exchange. The awful flexibility of rape and editing seemed to have parted gennine canversation, and the talk was so frag-mented and flighty that it might have been replaced by a Hopkins uhune-in.

That is not on insult to plane ins. which are often spreakative and spuntaneous. Arranged conversa-tions are now so dreadfully adout, sidving or dismissing the dismilities of time, place, and person, summin-

ing mileds in Tairly good simulaere of reol talk.

Although most of these voices were wise out warm, their conversation was synthetic, they were talk-ing not listening in a huldon of ideas and Information. Since they were neither addressing each other nor ony imaginable listener. I hope those who overheard the programme illil not mistake what went on far

typicol ocudemic organicus.
We were barraged with againions and insights, subtle, abylous, crudite, simple, flut, thoughtful; and with judgments, firsthand, secondband, sketchy, firm, allusive, oustly unsupported. There was no core, nothing which suggested that same under hod an idea whom presunting llopkins, or his critics, to some wide or narrow anchence.

The unerry was an idea with a sustained and developed that the continuous parties and the culle with a single parties and the culle with a supported that three lively introspective. I though that three lively introductory and that three lively introductory and the candid lack of enthusiasm, wall candid lack of enthusiasm, with conclusions had need been all them. If discussion had need been all the candid the candid the candidates and the candidates. If discussion had need to be a particular than the candidates and the candi

The saudwich course is the radiitional whole for activating beth of
these odns. Yet there is some evidence at the undergraduote level that
these causes are not meeting their
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Ronald Wells describes the results of a survey of British academics' evaluations of US presidents

The tops and tails of moral leadership

Illisturians are always uneasy when sue, because the American presipolitical leaders uppeol to future dency is often viewed as a position of moral, not mercly political, leaders The authorized to the United States which accompanied the Victoria war and Watergate the Vietnam war and Watergate provided many occasions for oppeal to future historians; especially during the "fired days" of Mr Nixon, those faithful to him stated their belief that despite Watergate, he would "go down in history as one of the greatest American aresi-

The purpose of this article is not so much to disputo that claim for Mr Nixon as to osk the larger question about history, and about what will "go dowo" as "the record" of the past.

Debute about presidents is a re-carring theme in the United Stotes, because, addite the British parlieberause, natike the hirtish parlia-mentary system, the American sys-tem relies substantially on the president to make it work. The late historian, Arthur M. Schlesinger, Sr, naco asked American historians their views on past presidents.

their views on past presidents.

In a poll, later published in the New York Times (July 29, 1962), he asked selected historians to rate the presidents according to their greatness. With the help of Peofessor Esmand Wright and Dr. Hawell Daniels, both of London University's Institute of United States Studies, I recently used the Schlesinger I recently used the Schlesinger nethod to ask some British lecturers in American similes the some queslons about the greatness of American presidents.

In writing to the British particlements in 1977, the mainly political questions were repeated that Schlesinger had used in Amarico 15 years and, in the hope of maintaining consistency between the two polls: "Did the president exhibit a creative parameter than the president of t exhibit a creative opportunit to statetraft? Did he properly safe-guard the nation's idterest in relation to the rest of the world?

Did he use the properly safe-Did be use the prestige and parametrics of the pushion in strance the public welfare?

The answers to such political questions are, neressarily, hong and complex, and libraries contain thousands life vidences which Czaniae then in the light of America's 200 year history as a

When osked to evaluate presidents as moral bodiers the bistorian's task is far more difficult.

A Roting of the Presidents (1962 railing in purculheses) Cumpelent
13. Cleveloud (11)
14. Madison (12)
15. J. Q. Adoms 1131
16. Eisenhower (22) McKinley (15) 5. Wilson (4) 19 Tofi (16) 20. Van Buren (17) 5. Truntan (9) 7. J. Allanis (10) 7. T. Rooseveli (7) 9. Jackson (6) 9. L. Johnson (—) Hayes [14] Hoover [19] B. Harrison (20)

part-time

pointedly kelieves).

When selected British "Americanmen and women agreed, although namy of them named the difficulties partially multimed above. Three persons found that they could not tarticipate because the poll ollowed them no room for the quadifications they felt accessary to include if their participation was to love full meaning.

that this result was "the vecilet of history," but one can nevertheless It would be pretentions to claim that this result was "the vecility of history," but one can nevertheless either result os the considered opinion of experts in the fields of American history and politics; out os such, it reflects something of the climate of opinion oot of which more lasting judgments only come. A nate on methodology, Schlesing ger's leaf from the 1962 poll was followed wherever possible so that comparisons could be made, the one of the shuriness of their terms. William H. Harrisan and James A. Garfiell were therefore exchalced, as was, of course, Ilminy that the new Government to du.

George Washington (in third of the constitution, the tather of his countries and the latter of his countries and the first nationally-cleeted president to the first nationally-cleeted president the first nationally-cleeted president that the first nationally-cleeted president that the first nationally-cleeted president the first nationally-cleeted president that the first nationally-cleeted president to the first nationally-cleeted president t exchaled, as was, of course, llamny Carrier. In addition, the evaluation was to facus exclusively on the was to tacus exclusively on the mun's performance as president, not on his urber services to the nation.

At the top of the list one-finds the continued favourite of Américan history, Abraham Lincoln, He prolongly would have been a good wast. oldy would have been a good presiof his presidency was that uf Amer-

or his presidency was that of Americu's greatest crisis, the Civil Wor. Liocaln used the powers of his office in hitherto unemphyed ways in order to preserve the Union begin "four score and seven years" before he rafiled the vision and the conscience of the untion from the handefield in the tyshory. He also issued the Emancipation Friedomathan during the wir, ood see in than during the war, ood set in process, the end of slavery when bustilities were to cease in 1865,

Some readers may perhaps he surprised in the placement of Pranklin Rousevelt in second position. But Rousevelt's greatness, like Lincoln's, is all the more uppresided because of the difficulties his administration and to face. He callied a mation whose confidence had been bully shaken by the Grest Depression by tellin Americans.

Rousevelt mok his place omong

Justicessful
26. A. Johnson (23)
27. Tyler (25)
28 Pillmoro (26)
29. Tuylor (241
30. Coolidge (27)
31. Pierce (281
32. Buchoosn (29)
33. Nixon (—1
34. Grant (30) 35. Howling (31)



Whiners Lincoln and Ronsevell, luser Nixon, yei-tu-be-decided Carter.

international headers during the Second World War, and insisted on the waconditional surrender of international fuscism. He brought the power of the brought the power of the federal gorecation of the Murshall Plan and Note that power of the federal gorecation of the Murshall Plan and Note that the power of the federal gorecation of the Murshall Plan and Note that was not until the story surrounding Wotcegute become known fully much become fully that most Americans become fully

In fourth place comes Thomes Jefferson, indisputably the Jeading political philosopher produced in the United States. He was to take the relies of pawer ofter the leglin-ontion pricess had been targely completed by Washington and Adams, and he used that power to point American institutions taward

Is there a common quality which unites these four "greats"? The old chestant of the undergraduote essay inight have it that "the lines make the man". Surely there is sonething in this, since each of something in this, since each of these men performed estimable service, to the nation in time of grent importance; but if that wos off there was to it, men like Boch-man, McKinley, limver and Fard twould also have risen to greatness. The "successful" cotegory al

The "successful" cotegory of presidents presents us with eight men. Woodrow Wilson, at the hend of the list, has been moved down from "great" in the previous list, where he was ahead of Jefferson. Although still regarded very highly by the porticipants in this poll, one must ask why he was moved down o category. o cutegory.

While one may loud Wilson's willingness to lead the United States into uccepting its international restorabilities, his groen of the slynomics of world newer and his faith in international orgonizations to energy page may energy before the state of the tions to ensure peace may seen o bit shallow to us who live in the confusing and dillicult world of the last quarter of tha tweoticil

Harry Truman, in sixth place (on Harry Truman, in sixth place (op from ninth in 1962) is the favourite of those holding "the times make the man" theory. He had given little indication in his earlier career of tha stature he would reread in the White House, At home his "Fair Daal" continued and extended Roosovek's "New Deal".

ment to beec open problems of social welfare which traditional American policial ideology had forbidden its Government to du.

George Washington government to du.

for him than fur the shellow jingoist, Polk.

Of current interest is the placement of Gerahl Furd in twenty-third place. Although he never cloimed to be more than an average men, many of his supporters would dispute an overage rading for his presidency.

Trying to make the presidency credible again ofter the Nixon dehacle was o difficult jab which he alld tulerably well. On the other hand, as one participant reported, the purdoning of Nixon was o singuing.

The Victuan War was ligalded to the victual war was ligalded to the Victual War was ligalded. the purdoning of Nixon was a singularly bod action which did much to daorage the entire reputation of the Ford Administration.

"In the "unsuccessful" onl "fallure" cutugories there will be little quarrel with the placement, save one to which we shall return. The incompetent and corcupt Hording would seem to be as unshakably pluced os the worst president as Lincoln is as the host.

Geont, o drink only in Incompo-tent, achieved the presidency on his Civil War record, and he remains llarding's componion at the bottom, although, be it said, this time placed in merely the unsuccessful category, rather than foilure, as before. We come at last to Richard M. Nixon. Mony grantic points reported

Nixon. Mony ranticiponts reported that the idacing of Nixon easest them greatest difficulty. We consoly inserve that if Nixon had imped to be occorded a leigher regard from history than that given him by journalists at the time of his resignation, that have has not been realized, at least in this exercise; be is placed thirty-third nut of 35, and porliously close to Grant ae Hard. porllously close to Grant ae Harding's rival at the bottom.

Part of the difficulty in assessing

the Nixon presidency is the we have hull to rethluk our views nf have hull to rethlik our views of the presidency precisely because of the problems which his cose presents. Before Vietnam and Watergute, most observers were enormured with powers of the presidency. Thus, good presidents were those who used power holdly (Lincoln, Rousevell), while poor presidents were those who sought to work in portnership with enugress and the cuurts (Buchaum, Elsenbower).

Schlosinger, in his 1962 poll, louded the "greet" presidents by noting that "Every one of these mae left the executive breach stronger and more influential than he found it". Nowhere is there in Schulies.

less illegally.

It was not until the story surroundlog Wotecque beceme known that most Americans become fully aware of the extent of the nucleyolent potential in a little-controlled presidency. To learn that a president of the United States was amazently counted in criminally.

apparently complicit in eriminolity only thin he escaped prosecution and imprisonment only become his successor quickly pardianced litin, was surely une of the must confidence-shinking lessons for a free suclety to learn.

in which bis use of nowec must be commended, especially in matters of foreign policy.

The Vietnam War was liquidated:

the read to normalization of relations with Chies was opened; the framework for detecte with the Soviet Union was laid; and much good effort was expended towards o Middle East settlement. These are not inconsiderable matters, and for them Richard Nixon and Henry Rissinger alexary, archiveles and Kissinger deserve gratitude

of assessing the Nixon presidency, o professor from Oxford perhaps spoke the minds of many of the par-ticipants in saying; "I think Nixon deserves a special limbo of his own active a special timbo of his own—alove overage on foreign pulicy, telow to ihre his moral torpinde—u kind of heta/epsihat". In the end, the poll did not allow for a special category, and the result is os we have noted.

According to the pull also are

According in this pull, the view frum Beltnin of the American presidency reasts to ogree with John Hryce in his honk The American Commonwealth that Indisputally great most have sometimes, but and from contains the sometimes, but and grent mon have sometimes, but unifronnemly, been choson; Lincoln, Roosevelt, Woshington and Jefferson oll tower over the others who lince held the same office.

The foll also suggests, however, that for 80 of the 187 years under review the affice of the presidency can be said at least to have functioned successfully; and for 150 of the 187 years at least with comne 187 years at least with competence, a record of which Amoricuns need not be islismed.

As far the future, the poll suggests that if Americans have learned
the lessons of excussive and uncontrolled presidential power, they
need not fear for the viability of
their institutions.

Why so little

developments, although the law career prespects which arise; of secure and hervalive job for the So far es the Open University is udmit its first studente in Octobor, plans to offer law degrees at Lancaster. York and Essex have the career, but take steps to realize such that end the companies that end the companies that end the companies that end the companies the career prespects which arise; of secure and hervalive job for the So far es the Open University is undertakent. So far es the Open University is undertakent, continued the career prespects which arise; of secure and hervalive job for the So far es the Open University is undertakent. It has been said that the career, but take steps to realize such that the provided But the argument is specially as the career prespects which arise; of secure and hervalive job for the So far es the Open University is undertakent. The care is the open University is the career prespects which arise; of secure and hervalive job for the So far es the Open University is undertakent, containing provided the provided that the career prespects which arise; of secure and hervalive job for the So far es the Open University is secure and hervalive job for the So far es the Open University is secure and hervalive job for the So far es the Open University is secure and hervalive job for the So far es the Open University is secure and hervalive job for the So far es the Open University is secure and hervalive job for the So far es the Open University is secure and hervalive job for the So far es the Open University is secure and hervalive job for the So far es the Open University is secure and Increasing the secure and Increasing the So far es the Open University is secure and Increasing the secure and Increasing the So far es the Open University is secure and Increasing the So far es the Open University is secure and Increasing the So far es the Open University is secure and Increasing the So far es the Open University is secure and Increasing the So far es the Open University is sec clunale impraves.

Provision?

If it not ull legal ocademics or the inchession view this expansion view t

The first the state of the stat

that end.

How does the admissions sufor, inundated with reasonably and well qualified school lesvers anxious for their chaoca at university, deal with such epilications? Certoinly not such epilications? Certoinly not to fovour, or loast to feel consider oble sympathy for the 18-year-old for whom pulversity application must oftan be a trying exporlence. Should no be denied to place because e 40-year-old plantaceutical company's export manager desires o change of job, no because e 39-year.

Though law is one of the maint be provided. But the argument is specious: case books alluming; tho university itself published is suill ovailable, but loss than in the past, with out a subjects; oud access to a law library some of the time will be a reol possibility for most students. If the Open University can pruvide laboratory facilities for its science students it can surely equip their studies.

LLB at the evening elasses run by king's Cullege London, but the course has long sinco been discussion of law southers with the moterials for their junion.

Some limited provision for part, with out a subjects; oud access to a law library some of the time will be a reol possibility for most students.

If the Open University accidents of their studies.

LLB at the evening elasses run by king's Cullege London, but the course has long sinco been discussion of law southers with the moterials for their junion.

dee has again heen un increase in the numbers seeking admission to had for a first degree in luw, many show will be disappointed. The nyerwhelming majority of whom expect to enter the profession.

The nyerwhelming majority of applicants for law degrees ore 18 to have provided at a characteristic property of the nyerwhelming majority of applicants for law degrees ore 18 to have provided at a characteristic property of the nyerwhelming majority of applicants for law degrees ore 18 to have provided at a characteristic provided and university of having returned to a lawyer.

The nyerwhelming majority of applicants for law degrees ore 18 to have provided and university of the nyerwhelming majority of applicants for law degrees ore 18 to have provided and university of having returned to a lawyer.

Thought the nesting counce having returned to a lawyer.

The nyerwhelming majority of applicants for law degrees ore 18 to have provided and university of having returned to a lawyer.

The nyerwhelming majority of applicants of low degrees ore 18 to he are full formed the majority of physical provided the mojority of the nature students as the formed law is not to he appropriate institutions of the operation of the nature students as the operation of the majority of applicants of low degrees ore 18 to he are full formed the majority of having returned to have a lawyer.

The nyerwhelming majority of applicants of low degrees ore 18 to he are full formed the majority of applicants of low degrees ore 18 to he appropriate in the full formed the majority of the nature students with the operation of the majority of the nature students and the profession.

The nyerwhelming majority of applicants of low degrees ore 18 to he appropriate company appropriate institutions of the profession of the majority of the nature students with the nature students and the profession.

If there is to be any further extends the majority of the natural state to trial state the professio

page would drag on all summer and the students would lose an academic

The decision to call in the police

universities-ungered expensist sta-

On the first day of the exams, the extremists broke through the closed

entrances to the campus, and brake up one exam session. They called a demonstration for the following day by their examples.

day him their printest fizzled out, apparently for lack of support.

The motives helded the computer attack and the day less the land the computer attack and the computer att

The motives behind the computer attack and the car burning were not clear. But the choice of Professor Cacciafesia reflects the ottlande of the extreme (and even the maderate) left to the type of professor known as "burous" for the power they wield in the university and, sometimes, the pulitical establishments.

Professor Cacclafesta, whose sub-

ject is figureial mathematics, is a member of the High Council for Education, the nuthoritative body which advises the Minister of Education. He wish holds a senior nost in the Indian Broadcasting Cornoration is a member of the

nost in the Indian Broadcasting Corporation, is a member of the government's planning coincil and sits in the board of one of the biggest hanks.

This ouderste views are well known from the articles he writes regularly far the right-wing newsuaper Il Tenno.

regularly for the right-wing news-paper II Tempo.

Professor Caccinfesta norrowly missed being elected as a Christian Democrat in last year's election, and was one of the noin contenders

is future. Mike Duckenfield reports.

year it is celebrating its quincenten-

Set up on the initiative of Arch-

Scientists fight safety curbs

of a major step towards the use of recombinant DNA techniques to produce insulin has added fuel to ago when 11 American scientists when the state of the grawing feeling among scientists wrote to Nature and to Science ing three years developing fails after that the potential risks of such search in which genes are trans-sible dangerous against the possible dangerou ibly daugerous organisms—have

Scientists are now battling at federal and state level to convince legislators that—although some rules may be inevitable, and probably justified—strict regulation of recombinant DNA research would nd advances in medicine.

Some are concerned at the poslahocatories, research work and scientists, and the subsequent uspection of research facilities by rke government. They are also worried about the cust of adhering



At present, scientists are expected to work within guidelines drawn up by the National Institutes of Health, but Congress is preparing to turn

States, ron, may make their non-bass. For example, in California, where much of the early work was done, the health committee of the State Assembly has proposed legis-lution to establish a DNA safety commission to regulate propositions. commission ta regulate recombinant DNA research throughout the state. This would include research by pil-

vate drug companies.

planted from one organism to mems, he was now far less apprenanther. A conference of world scientists followed a Actionsol sciencists followed at Asilamar,

near Sun Francisco.

Dr Stanley N. Cohen, professor at medicine at Stanlard University and one of the 11 signaturies to the letter, was one of the main initiators. But he has since told the California bealth committee that some of the scientists who lives one some of the scientists who liest gave the alora pow believe that their initial concern was greatly evag-

This changed attitude was the result of four years of recombinant DNA research in America und abroad, Dr Cohen told the commitnee. He said 200 published papers had given no evidence of barm_to

that public perception had lagged that as evidence has accoundated that there are in unrel lazards associated with the research, fears of the ritizenry lave increased, and in the ritizenry lave increased, and

for "almost mystical reasons" to fear hazards where experience had shown there were none. Others who were decayly concerned almor pus-sible luzzards had since changed their views.

He was referring in particular to Dr Roy Cartiss, from the Univer-sity of Alabama, who recently wrote But scientists say that state laws would be an innecessary duplication, Microbes do not respect state boundaries, so that—if there is a Dr Donald Fredrickson, saying why DNA chain.

From Ian Anderson

STANFORD

The annuancement in San Francisco

The annual San Francisco lessuess. — members of science and health com-the controversy arose three years mittees in Washington.

Dr Carriss said that after spend



liminars or to the environment. Example recombined by the surface suggested that even genes recombined DNA research, a team known to be associated with disease of seven scientists from the Uni-traits failed to make disease-produc-versity of California, San Francisco ing interches out of laboratory strains.

Dr Cohen said it was unfortunate governs the production of insulin.

This means they now have the potential to produce insulin from animals via bacteria. Beyond that of the ritizenty love increased, and most of the public believes that extensive legislative control is necessity legislative control is necessity.

But will legislation discourage or a Swiss physician working on the team, said that everybody in the part of our enforcement program", field was warried about legislation.

The principle of stopping or retord—

In March Mr Califano had caused ing research because it may be dangerous was in itself a danger and he asked where it would eml

The illustrations show part

Washington face dilemma over access to higher education

THE TIMES HIGHER EDUCATION SUPPLEMENT 122

Inseph A. Califano, Ir, sections, of the Federal Department of Health, Education and Welfare (HEW), would like along with his bass, President Carres to increase hass, President Carres from minimates. rity groups in American rolleges. Blacks, especially those aspiring to the middle classes, played a sig-nificant role in Mr Carter's election and they will suon start to examine the Carter Administration's efforts to better their status by opening wider that traditional door to success-higher education.

However, a series of contradictory law) and antendments from Congress, and a befindfling series of rulings from the Supreme Court have left the affable last cauny Mr Califana with few logal teeth. His dilemma is demonstrated by the address he gave recently at City College, New York (CCNY), the oldest college in the city's milversity system with a deep communication the low-cost, high-quality education

ut minorities. Of the many prestigious graduation, has charged that the basion coromonics be might have sity of California practices tong tion ceremonies he might have attended, the country's highest edueation official chose this college to number of places for minarity stress the Carter Administration's depth in its medical school is dedication to CCNV's ministed goals, plaints that because of this place. But his address was fuzzy, yague

and almost intrepartable.

He called for colleges and miversities to make more stremmus efforts to seek out minority students. In monitoring the conposition of colleges and universities, the federal Government "must rely on numerical goals" but nevertheless " arbitrary quotas will not be

a sile over his use of the word "quotas" to describe the policles he wanted for admissions to higher He later said he had been mistaken tu use char word, and had only meant to arge "afficinative action" against discimina-tion: "Affirmative action" means that, if there are two equally quali-fied candidates, the candidate from

from Thomas Calcill

NEW YORK

Juseph A. Califano, 4r, secretary

Juseph A. Calcifano, 4r, secretary

Juseph A. Califano, 4r, secretary

Juseph A. Califano,

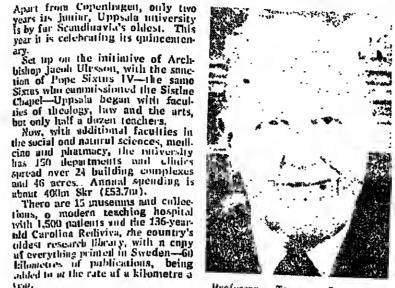
The problem in trying to tegen The problem in trying to teger what Air Californ means is the there is no legal basis by which the federal government can cought colleges and mirroritles to at more real goals for admissions. The manufactured goals for admissions the colleges and adherence to affirm the colleges. ran compel adherence to affirmative action in hiring procises—though even here there can be no question of strictly numerical goals

In an interview with reported afterwards, Mr Californ refuse is explain the difference being 18th and quatas. When asked sty enforcement programme he had A test cuse of special add a

oldest research library, with a copy of everything printed in Sweden—60 bilibrateness of publications, being odded to at the rate of a kilometre a procedures is now before supreme court. Allan Bakke av. Reflecting the national trend, stu-dent numbers trebled in the 1960s, but have since declined to obout 15,000, of which 2,300 ore post-graduates. Hypvala also has obout 4,000 employees; 1,600 of them tea-The bulk of funds (77 per cent) he was excluded from admiss minority students were ramined. Air linkles has already been so

now comes from government grants, though, with a further 10 per cent provided by the national research councils and Swedish Board for Technical Development. The current distribution of research funds underline, the traditional policies. held by California's Supreme Con Civil rights groups, fearing that is Supreme Court---on which these servative Nixon appointees so the hold the balance of powersuch programmes, atempted s our success to persuade the big sciences and 5 per cent to the arts.
Although one-third of the university's buildings date from the sity of Californio not to appear

eighteenth century or earlier, premises—in terms of room space blow to all sorts of minerital Mr t'alifano, then, seems ha arcomplishing by immendo zdi fluence what he cannot not see plish by law and may some of prevented from accomplished



Uppsala University celebrates its quincentenary this year with severe misgivings about | Italy

After the party is over...

Professor Torguy Segerstadt

with accommodation, with two or three room flats for married couples, shared kitchens, laundries and day murseries. The union also runs its newn health service em-ploying several doctors and psy-

councils and Swedish Board for Technical Development. The current distribution of research funds underlines the traditional priorities, of the 70m Skr spent last year, 49 per cent went to the natural sciences and 31 per cent to the social sciences and 31 per cent to the social sciences and 5 per cent to the social sciences and 6 per cent to the social sciences and 6 per cent to the social sciences. Although one-third of the university Granton (the University Diagram (the University Granton (the University Diagram (the University Granton (the Univ Sixteen Britons will be among the Strangeways Research Luboratory, Cambridge.

Professors Jeremiah J. Hagan (University College) and G. F. Mitchell (Trinity College) oro the two Irish academics to be honoured. bare dambled in the past 12 years.

New buildings include a centre for gradume enconcers, o gendetic rentre lucluding huildings far malor barnelical enurolex housing the miser patients.

1500 students and 900 recorded.

Professurs Jeremiah J. Hagan (University College) and G. F. Mitchell (Trinity College) oro the two Irish academics to a honoured. On a list which also includes the Finnish President, Dr. United Kokkmun; the American sociolismics the Marchen Mand the direction of nager bannedical camplex housing 1500 students and 900 research surkers, and an even larger Centre for Social Science and Linguistics with room for, 2,800 students and 400 staff.

The last 10 years has also seen a rapid expansion of student facility. a rapid expansion of student facili-ies, particularly housing. A student union-run foundation now In addition, the university is pub-

search in different subject areas (the first lit will also appear in English and a 260 page general The Dean of Rome University economics faculty has been shot in

turn meir attention in the academic world. Professor Renn Cacciafesia, known as a moderate, was attacked in the same way os hournalists, magin the same way is more mensis, mag-istrates, civil servants, foremen in big industries and policemen have

Many people four that these new local bureaucracies will fail to appreciate Uppsala's national role, both as the leading research unityersity and transfer of several unityersity. versity and tencher of specialisms such as Egyptology, ostronomy and "dend" languages.

The university's rector, Professor Torgny Segerstedt, a member of the Swedish Academy and a leod-lag critic of the roburn, is worrled that the new baards will seek tu influence what is taught and uso the distribution of funds to emplin-size applied (rather than pure) research. Instead of the prolifera-tion of new institutions to promote recurrent educational expensions. recurrent educational opportunities, l'ufessor Segerstedt would have preferred hertor provision for diatanco tenching bused an the exist-

As it is the reform means the university must integrate with the local college of education and with nursery tencher training und domestic science colleges into n single Uppsala höyskulo; and half of the 10,000 new admissions this nuturn will be of the region's fair other courses. faur other centres

Though less thrustle thun originnlly propased, the changes mark n clear hreak with the past und will he felt mure at Uppsula-the most ivery-towered of Swedish universities—that elsewhere. This year's jubilee is a turning point us woll ns un historical landmark.

Minister says no to brain drain enquiry

GRAHAMSTOWN

memorative passage stamp was issued this spring.

But despite all this, the jubilee is being colebrated amid curviderable uncertainty about the future.

At the beginning of July the language reform of higher inducation comes into effect and, when students start studies this automatic the net

comes into effect and, when students start studies this automat, the mily one of five tentres of higher education (högs-kolor) in a newly constituted Uppsala region (THES, May 13, 1977).

Corering an area of central Sweden as large as Demaurk, the region will be unbinistered by fire local boards oud a regional coordinabands, members and two-thirds of the regional boards of the local boards' members and two-thirds of the regional boards' will be noned for the regional boards' will be noned for the regional point's will be noned for the regional boards' will be noned for the regional boards' will be noned for the regional boards' will be noned for the regional board's members and two-thirds of the regional boards' of the local boards' will be noned for the regional boards' of the local boards' numbers and two-thirds of the regional boards of the local boards' numbers and two-thirds of the regional boards' will be noned for the regional boards' of the local boards' numbers and the regional boards of the local boards' numbers and two-thirds of the regional boards' of the local boards' numbers and two-thirds of the regional boards' of the local boards' of the local boards' of the local boards' of the regional boards of the local boards' of

about a year.

The day after the attack on Professor Caccinfesta the cor of the director of Runie's student hostel was destroyed by fire. A few days earlier the director himself, Signor Autonio Motta, had found a homemade bomb under the car.

The ottack on Professor Cacclafesta came as fresh trouble appeared to be brewlag at the uni-

The offack on Professor Caccia-festa came as fresh trouble appeared to be brewling at the uni-versity over the presence of large police detachments. These lind been brought he in ensure that stu-dents could sit their end of year examinations. They had already been postponed

for nearly a otenth because of a strike among non-teaching staff. The authorities, decided to take firm action when it seemed that the stop-

Professors rescue colleagues

from students who failed of 20. Only 40 students scored 10 or more. A low standard af northescience maries was blomed for most af the

West Germany

new regulations.

Sixty professors of the science faculty of a university in the outer known sof Lynns were held hostage in the sculor common man of the

Dean shot as guerrillas

look towards education

economies faculty has been shot in the legs as Italy's urban guervillas

The students then oneved in, barricading the 60 prafessora, who hoppened to be together at thot particular moment.

who forced the locked doars ond overcame the three students in a quick scuffle.

During the night tha students on guard let some hostoges out to buy sandwiches and drinks, and the professars themselves, who were in touch by phoue with the president of the university, asked that the polica should not be called in.

It started when the results of the litt year examination were posted.

Admission, for second year studies periods on passing the examination of the policy for passing the examination.

During the posted on the examination of the control of the passing the examination of the passing the examiners had had to lower that pass mark level from 10 to 7.5 out The National Students Union Completely disassociated inself from the affair and in a public statement said: "This kind of cowboy action by a few hotheads can pady bring discredit on the student body while not helping in any way to solve the read problem—the whole value of the digional system?"

It also showed up the low trees.

Foreign students: Flying start for **OU-type** courses

Bureaucrats want too much data, say statisticians effield pose data systems were being set up on the wrong assumption that one system could serve all purposes. The urged that the various needs of the property of the property

from Edward Sheffield

Too many unnecessary, statistics about higher education are gathored, tao much data is requested by bureaucrats to increuse their control over universities and colleges, too little significant unnlysts is being done of data available, and statistics oppropriate for higher education policy are virtually ignored in Canada. These were some of the chorges made at the amutal conference of the Canadion Society for the Study of Canndion Society ! Higher Education. Society for the Study of

Mr Bernard Trotter af Queen's University, Kingston, said that planners and policy makers should be involved in an information system. Because of their increasing demand for information for their increasing demand for information so that they could exercise control with a their institutions or provincial jurisdictions, he said, administrators of universities and provincial ministries were becoming so involved that they were not universities and planners but are toking over the function of formulating as well?

different uses of statistics should be met by minimum lessic dats on all participants in higher education, supplemented as required by special studies.

Dr von Zur-Muchlen of Statistics Canada inld of his nwn extempts to "repuckage statistics" in arder shorpen current issues in the field. He gare examples as studies af the prospective decline in uni-versity enrolment, the imbalance of supply and demand of PhD gradu-ates, the aging of university teachers at a time when recruit-

Labour studies centre funded

A Canadian Government, grant of \$2,000,000 a year for five years will enable the Canadian Labour Congrass (CLC) to set up a national labour studies centre and five regional centres.

The olm is to enoble officers, officials and potential labour leaders to learn about the goals, policies and responsibilities of the Canadian Labour and Congress, and the knowledge and Sulfis of the Canadian Labour and Congress, and the knowledge and Sulfis of the Canadian Labour and Congress, and the knowledge and Sulfis of the Canadian Labour growth and the canadian Labour congress.

The gront will be inflation proofed, An odditional \$500,000 a year for five years will enable the Canadian Labour congress, and and the special proofed. An odditional \$500,000 a year for five years will enable the Canadian Labour congress, and an analysis, policies and responsibilities of the Canadian Labour congress.

The gront will be inflation proofed, An odditional \$500,000 a year for five years will be provided to help and the distribution of the congress and the showledge and skills of the canadian Labour congress, and and studies canire was drawn up and the proofed to help and the distribution of the congress and the showledge and skills of the congress and the showledge and skills of the congress and the showledge and skills and studies canire was drawn up and the proofed to help and the distributions.

The plan for o labour education in the congress and the showledge and skills of the congress and the showledge in the congress and the showledge

Harvard plan to improve standards

CAMBRIDGE, MASS Harvard has Introduced a rigorous new curriculum that would require andergraduates to master a "cora" of knowledge in fields uniside their

public funds for student aliens CAMBRIDGE, MASS has struck down a New York state discriminated analysis diens, And two the reluxation of two that withhold college scholar-these have been an Arizonali student princise of the 1960s, other student linaucial help from New York state law that linear his laws to the linear li

iew curriculum that would require and experimental and experimental and in the results of knowledge in fields unside their major subjects.

This core proposal is the creatian of the Dean of the faculty of terts side sciencea, Henry Rosavsky, what says it is designed in "define a set of standards now locking for undergraduate instruction."

The margin in the new decker of the marking up in mytical other ways to set in the standards now locking for undergraduate instruction."

The margin in the new decker on student alid, however, was gold court ruled by five to four that the statute was unconsiltationally discontinuous.

The margin in the new decker on student alid, however, was gold court ruled by five to four that the statute was unconsiltationally discontinuous.

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The margin in the new decker on student alid, however, was gold court ruled by five to four that the statute was unconsiltationally discontinuous.

the that withheld college scholar-ships, tultion grams, loans, and other sindent linancial help from aliens who showed no intention of applying for United States citizenship.

According to the now invalid law, any student, who had our either applied for citizenship or signed a special statement of his intention to do so, was harred from taking up law of New York state law, was used to the property of the resident aliens, like citizens, property in the property of the proper

supply and demand a supply and demand a supply and demand a standards now locking for unual field manpower between provinces.

By deathers and of highly qualified manpower between provinces and instruction."

As the praposal now stands, the cora curticulum would involve students and of highly qualified manpower between provinces.

Dr Douglos Wright, deputy secretory for social development for Ontario, exceed that there was tao in much useless data, but thought that not enough good infurcation was that currently exist under the robic of produced about the most impartant questions in higher education. Potential problems should be activated to find the partant questions in higher education. Potential problems should be activated to find the partant questions and the partant questions are few broad but highly structured courses.

The new duriculum would involve statute was unconstruction."

As the praposal now stands, the cora curticulum would involve students mantering "Intellectual skills", and "distinctive ways of thinking". It would eliminate the number of the construction."

The case had been brough by apprintees from apprintees from the currently exist under the robin and hear the partant questions in higher education. Potential problems should be activated to receive a state when a few broad but highly structured courses.

The new duriculum would involve statute was unconstruction."

The case had been broad hear hough in the case had been broad in administrations, were mostly in the case had been broad hear the form of the statute was unconstruction.

The case had been broad hear hough in the case had been broad in the case had been broa

Supreme Court ruling opens

Michael Rinyon, North America correspondent, is on holiday,

Proposals could regularize practical training periods

Suggestions to improve practical raining periods within secondary proposed in a recent memorandium of Social Affairs.

Suth training periods within secondary proposed in a recent memorandium of Social Affairs.

Suth training periods within secondary proposed in a recent memorandium of Social Affairs.

Suth training periods within secondary proposed in a recent memorandium of Social Affairs.

Suth training periods known on tages in Dutch, olways take pace outside educational establishment or in hais, for instance, in firms or in stal government services. The stal government services. The stal government services and of o "sisgo" varies enorging from an an onthing the stalents troiting to be librarians higher vocationel education to the light two wars for highly courses such 08

Discrepsicies in the present system, such as the quality of the practical training, the legal position of students while training, and their windows to troval and other windows ments abound, aven the memorantee.

Some attadents may receive a few pounds whoreos for others it may ruo luta the hundreds for contributing to the production process, Because trainees are in the technical sunse still students from an education of establishment, employers are not obliged to pay minimum salarios and holiday bonuses.

while the same type of courses.

The memorandum is a much sheld and other sheld proposed that such as a much of foreign students in West German such as a mu

South Africa

from Martin Feinstoio

The gavernment hos refused to commission an Inquiry into the growing number of emigrants, particularly graduotes, after a dramatic riso in emigration figures this month.

salarios and holiday bonuses.

This results io some firms exploiting trainees us cheap labour, giving them nominal poyment when they may actually be replacing o "normal" employee. If this is the cosa

mnl" employee. If this is the cosa, ond it is very difficult to prove, then the student is by law regarded as an employee and entitled to full salary rights. Students, bowover, even if aware of these rights, do not always cluim them for feer or losing their troining places.

Replying to opposition ilemands in Parliament for an official inguiry into the increase, the Minister of Immigration, Mr A: L. Schieleusch, said that the request was impractical, and might prejudice omigraits who wished to return to Sauth Africa in the future,

Students stormed into the con-

students stormed into the com-man room on a first assumt on the professors, complaining that the exomination papers and consulted two questions not on the syllabus. (Titls was later denied by the presi-dent of the jury of exominers.) in the sculor common main of the university campus by a group of students with had been follod in their first year diploma examinations. They were loter released by 30 other professors.

The hizarre stary mode beadlines in the French national press, but was more like a rather grotesquiring diam a dangerous confrontation. The 60 professors were held all night by three students acting on behalf at the several hundred first year students involved. They were "liberated" the following moting by a group of 30 other professors who forced the locked doars and overcame the three students in a decision made overcame the three students in a decision made opened to be together at that point the besieged professors, including some of the ambient jury, calmed things flowed as a decision made "university the next day this was were fully in the following moting for the full jury the next day this was a decision made."

The students there committees the following moting by a group of 30 other professors.

The first year diploma examination papers and contained two questions not an the syllabus. (Titls was later denied by the president of the full year denied by the president of the f

F C i

Nothing but the

HIGHER LIDUCATION SUPPLEMENT New Printing House Square, London WCTX 8EZ, Telephone 01-837 1234

Teacher training reorganized

declared redundant, of well-known institutions clusing and of others losing their identity within some regional conglonerate. In human reorganization affers better appurreorganization affers better appearant tanities for those what wish to train decline.

and whether it will produce better leachers for the schools.

In addition 18,000 places have been included far in service education.

hoste teacher training system which would be capable of expansion to meet map foresceable needs in the 1980s" and to "make the best provision passible for in-service and initial training in the period of the 1990s" and floally to "preserve existing professional and academic excellence and to create an institutional structure in which teacher training calleges was increasingly incapable of respanding to the new demands af the schools and the Huw far lins she succeeded?

Given the constraints within which she was working, given the thme manpower planning in teacher tealning, given the influence of extruneous factors in some of the marginal cases, it must be said that the potential for a much improved

So finally the talking has to stop In her speech in the Hause of miles at least we may know the main shape of teacher education and that she thill not wish to have then the HRC's educational departfor the next decade. (Iver the past a teacher training system which ments derate little time two years it has been easy to would create a surplus of qualified become obsessed with very real teachers for whom jobs could not human problems of stuff being possibly he provided. But her final list, retaining five colleges, has in-creased the number of initial trainers and questioned her non regional conglonorme. In human strategy of concentration on larger institutions. The predictions upon the cern will be fell about some features on the final list announced this treek. However, the major question now is the extent to which reorganization affers better more.

tenchers for the semant.

In January of this year the Secretary of State said that the government strategy was "to establish a hosic teacher training system which that local authorities will release incapable of responsibling to the new demands at the schools and the higher expectations of the students. That system is may over and the country has a chance to bring rea-cher education and training into the main stream of academic and profes-

sional derelopment. Mrs Williams and the Secretaries of State that follow should be given one clear warning: the turmoil of the linst five years has come riose to destroying the confidence and the moralo of those what trained the tenchers, the criterion fur animaling that total system must now go beyond an animal review of the relevant statistica. A period of stability and opportunity to work with known resources and within the potential for a much improved systom of teacher training now exists. Teacher training is firmly established within higher education. In future half of all new teachers would be groduotes who have raceived a year's postgradunta-training, over 80 per cent of those who receive three or four years' training will be based in colleges of higher education or polytechnics. And so Mrs Williams twould sesm to have achieved her overall nbjactive. However, one is still left with uneasiness and some uncertainty.

Complaints in big science

University scientists whose experi- considered the Rutherford's propouniversity scientists whose experiments are not receiving us much support from the Science Research Council as they think they deserve a sometime grumble obout the huge simus the SRC spends on "big science". Over the past two or three years the council has been responding to these critics by starting to move funds away from nuclear physical process.

Fr

Sex discrimination

If the lovel of a previous salary is to be a deciding factory.

Sir,—I we opposed to read of the decision made at the Employment is to be a deciding partiting in the love of a new one, then working partiting in the love of a new one, then working partiting woman's olght year partiting a woman's olght year partiting of course in the cultive of one of course in the cultive of course in the cultive of course in the cultive of course in the cu

LETTERS TO THE EDITOR

BBC and education

Sir, -We read your report (THES). Psychological Society, appeared in June 17) on the "Annan and Edn-the Health Education Journal, and cation" dehate at Lambon Universe reprinted in the Cambridge University with great interest, but mixed feelings, hecause it served to give wider correctly to what we helieve resources in evaluating the effec-tiveness of their educational programmes. This orisunderstanding is given public expression in poro-grophs 19.10 to 19.12 of the Annan report; it was extended by Professor Himmelweit at the London Uni-versity inverting you accurately reported; and it was underlined by your headline.

We have to differ with Professor inwards the end of the deraile, but the birth rate may continue to decline.

We have in mare in intervals of fact and in principles of strategy. We have known about the latter for not be a strategy. long time and we should like to continuent briefly an these in our last two paragrants. But we ore surprised that we have to correct errors of fact, since Professor Himnelweit is generally very occurate. It is quite nurrue that the BBC

has never asked his mulience re-search department to carry but my investigations on its educational pragrammes. Such requests have been made and men an anomber of occu-sions in the field of adult educa-tion. In general, however, that department serves a different range of purposes; and what Professor Himmeliveit ignores is the fact that the School Broadcasting Cmmell and the IIIC's Further Education Advi-sory Cauncil have their two re-search section of professional staff to conduct survey research among schools and further education insti-

Nor is it true that no effort was made to find out from children and parents what they had learnt from tha primary sex education pra-grammes. As Frafessor Himmelreit knaws, a very thurmugh piece of independent academia research was undertaken into the BBC television sox education programmes by Rex Ragers, then of the Landon School of Ecanomics, under her own illrec-tion. This was summurized in New Society, presented to the British

considered the Rutherford's proposed sals to build the SNS.

The fact that the machine would have eost £35m to build from escratch does not, of coursa, necessisting moon that it is an irresistible hargolit for £11m (using plant end equipment from Nimrod, which was only good fortune ideally suited to conversion I but there are good escientific recsons for belleving Mrs. Willoms's claim that the SNS will be en excellent bargoli.

Although the machine is a considered and operation depend on nuclear physics, the selentists whom it will eventually serve will not be high energy physicisms but a wine raoge in discussional server will use the neutrans not to probe the world of high energy physics—the inner structure of the atom and mysterious submanic purficles like the quark—but to investigate the arrangement and behaviour of facting and moderness within the selection.

The fact in the trice of the atom and mysterious submanic purficles like the quark—but to investigate the arrangement and behaviour of facting and moderness within the probability and the selection. This was summurized in New Society, presented to the British

Garnett Induction

Sir,—I teed with interest Fred Hunter's piece (THES, June 17) on the devalagment, of this annex of Garnett College, of the LLEA's innoventian protection. Mr Hunter was kind enough to discuss with ma tha first half of his report, but I did not see the lottor port until publication.

The figures which he quotes in my view, misleading. So for as f can see, thay derive from a survey conducted by Mrs Thalia Morriott, a student-incide by Mrs

sity Press paperback, Sex Edocu-tion: Rutinude and Reaction. Mr

Rugers unted that the programmes led to marked rhanges in shildren's sexual attitudes and increases in various aspects of their sexual knowledge, and that a very high level of parental approval was recurded. The School Broadcasting Conneil

wos simultaneously monuting one of its major research and evalua-tion exercises, through its research section and its colocation officers, into both the television programmes and the radiovision programmes. A report on the response of children, teachers and parents, by Mrs E. C. Mee, formerly senior inspector for primary schools, and then primary education ronsultant in the IIBC, was published in the pamphlet School Ironaleasing and Sex Education in the Primary School teacher. cation in the Primary School (and also summarized in Sex Education :

Rationale and Reactions.

And these sex education television and radiovision programmes were extensively piloted by filote producers and Education Officers with teachers, children and parents before being finalised and transmit-ted. Many other school broadted. Many other school broad-casts in other subject areas are similarly piloted in advance. On paints of strategy we should like to say that we find Professor

Himmelweit's views surprisingly simplistic. We believe, of course, in objective research; we should like to do more of it; and we should like to collaborate with more external research hodies in extending its scope. The fact is that such research is very expensive and time research is very expensive and time consuming. How we do not believe this is the only channel of craina-tion. We believe that professional judgments of teachers, advisers and field officers also count for some

thing,

We feel that Professor Himmelwell'a approach is too linear and
ton limited. We see evaluation as
a monifold activity: developing
controlled was broader view
should like to see this broader view
of evaluation upon many equals by of evaluation given more emphasis. Yours fablifully, DONALD GRATTAN, Cuntroller, Educational Broadcusting,

Brondcasting Hunse, London, W1

mouts are use, receiving at anoth addence flower of the special control of the special cont

London Bill past, or nothing

from Sir Frank Bardey
Sir,—The senate of the University
of Landan does not share you
leader writer's omniscient certain.
of academic government not only
of ac

int achientle government flot och univ lon during the remainder of this rentury "-at least as for all of imposing contemporary ideas of this rentury "-at least as for all of imposing contemporary ideas of this rentury "—at least as far at of imposme this university is concerned has a far at relevance on the history of education for precisely this reason that are relevance on the history of education that the university's Private has relevance or the history of education than the university's Private has reall in the constitution fustead, it simply accords us be

FRANK HARTLEY.

Vice rhancellar, The University of London.

Earmarked science

The version of social history that jacket on the university our tution at least in regard to see speal in me must in fact is the history of opinion—not the history of ideas, but the history of how people in action have interpreted and reinterpreted their world. James Mill proclaimed that "opinion, of sectional interests such as text unions. This is of course proof the situation under the University of London Act 1926 which the signified progress in recent ret and from which the university at one sort or another, gaverns the world. Even when it is but a pre-judice, an errar, there is no poorer in the moral world computable to release. We firmly believe that the

is an the proponents of this to in prive the case for losse its power ". sperific constitutional oncodes into the Bill-amendments with past that can be counted and measured, and social history has things to learn and contributions to make in that direction. But the nature in some respects and the

Cadication Act in 1870, after decodes is of controversy. There followed the case of school hourds and buard schools, problems of muchinery, sumbers and rivolry with voluntary schools. The 1870 Act did not make educadon compulsory for all, but the principle of compulsion was a group being the principle of th tions of any such celloo and part would truly be omined universities nationally. Rengthened by an Act of 1876 and made naversal in 1880. These were secompanied by changes in the currentum and concerns about scleudic education.

on the fundamental principle and John Maynard Keynes prote: "A social consciousness has received it would of itself make no rhanger study of the history of apinion is not all in the constitution, fustend, it simply accords used occessary preliminary to the entantion.

To 1877 the Sounday Review rounding the provinciple of comments of the principle of comments and in the principle of comments.

freedom to alter our arrangement from time to time to meet be which makes a man more conservative must achieve the sent of at least two-thirds de gaverning bodies in the innere part overting over-confident assumptions and distant future for the class that measures are any particular most after the arrangement of the circumstances—which did to the minimum of the circumstances—which are the last of the class in the circumstances of the class in the innere that the past of the class in the innere that the past of the class is the confident assumptions and distant future for the class in the innere that the past of the class is should have come clean set in the circumstances your confident assumptions of the class that measures are all around and in us, we incorporate them even in tesistance in the circumstances your confident assumptions of the class that measures are all around and in us, we incorporate them even in tesistance in the circumstances your confident assumptions of cluster which have come clean set in the measures are all around and in us, which was demanated and including as closed as revolutionary in the inverse sense, is now placidly accepted on all hands. Why? One might expect that historiaas of caucation and of succepted an all hands. Why? One might expect that historiaas of caucation and of succepted an ull hands. Why? One might expect that historiaas of caucation and of succepted an ull hands. Why? One might expect that historiaas of caucation and of succepted an ull hands. Why? One might expect that historiaas of caucation and of succepted an ull hands. Why? One might expect that historiaas of caucation and of succepted an ull hands. Why? One might expect that historiaas of caucation and of succepted an ull hands. Why? One might expect that historiaas of caucation and of succepted an ull hands. Why? One might expect that historiaas of caucation and of succepted an ull hands accepted an

Historical attention has been locused mainly on payment by results from 1862 and far the rest of the conother concerns at the 1870s about the quality af education have not been seriously examined. In fact, how the Victorians suw the quality and value at their education, and what they mean by these, has been only narrowly discussed, and their weekly in the seriously discussed, and their weekly in the seriously discussed. then mastly in ronnexion with the grammar and public schools.

But while the nation was congratulating itself on having achieved its education legislation, in 1870 other tones of voice were being heartd. John Morley in 1873 designered an auslamph on the standards of the denominational schools, dards of the denominational schools, contary historical any make than mysterial schools. But while the nation was confarour one or two sectional isless are the conceivably at the expense power of aninion is e crocial focus others.

The House of Lords select is for the social historian, and takes the other of the denominational schools, continued the structure of the social historian, and takes the other of the denominational schools, continued the continued that the structure of the social historian, and takes the children of the denominational schools, continued the children of the denominational schools, where education "has been almost two the children of the working-class no further than the gates of civilization, and takes the children of the working-class no further than the gates of civilization, and takes the children of the working-class no further than the gates of civilization, and takes the children of the working-class no further than the gates of civilization, and takes the children of the denominational schools, where education "has been almost the children of the working-class no further than the gates of civilization, and takes the children of the denominational schools, where education "has been almost the children of the working-class no further than the gates of civilization, and takes the children of the denominational schools, where education "has been almost the children of the denominational schools, where education "has been almost the children of the denominational schools, where education "has been almost the children of the denominational schools, where education "has been almost the children of the working-class no further than the gates of civilization of the working-class and the children of the working-class and the children of the chi

jecting Marley's dinguosis of the clergy os responsible for the low quality, agreed "as to the worth-lessness of much that now goes by the name of ethiculian". Lyan Playfide considered in 1870 that "wa have the disgrare of having the worst educated people, as a whole, of may country which professes a high clylligation."

Wo know remorkably little about he quality of Victorian education as the Victorians saw it. The history of the classroom is nimost non-existent, and we cannot qualify our genoral statements by reference to practice, good or bnd.

Opinion about education is less well mapped than the hooks might suggest, including on the subject of rosistance to popular education, which hod been trumment throughout the inferenth century, and remained as in the 1870s. There is still at less one book or pageomine still at least one book, or pantomine or television spectscular, to be written about the long fight to hold hack populor education in the minoteenth century—and up ta, and including, tha 1970s.

Quality of Teachers

One centrol aspect of cuncern about quality in the 1870s was the



"The School Hosed Man": why was enfarred attendance candemned In 1870, but accepted by 1880?

chers in ant primary schools "was the "kernel of the whale minuer". When there were people who sny the status and culture of the reucher as the most important educational question, it is obviously im-portant to ask haw the mild-Victarions appraiched its implications
-but historians of colocation and of society haro on the whole avaided

The question of relevance is cenrentury has oreant mare than my thing else a preaccupation with the

effarts to understand the growth ernment and the state in the past contury; but the fact is that his-torlans of education have tended to clase their eyes to features of social change that hove not seemed vant " ta these effarts,

E. H. Carr lins wurned that the Africolan view of Greek society is a pre-selected view. There is also so to spenk, an Athenian view of Victorian society, at least an Athen-ian emphasis—historians have 100 willingly accopted the facus that "Atherian" spokesmen for the late Viciorian state cuma ta reprosent. Thero ore "non-Athonian" views

There ore "non-Athenian" views of nineteenth-century saciety and chucathin—and no one has done more than Professor Ilrian Simon to shate us where to fipd them, in looking at the educational implications of lobour, radical and tropular movements. We need to go further in pursuing other versians of the non-Athenian view, particularly by escaping from on ubsossive concern with the state and its institutions.

Taxon special encouragement of encouragement of each constraint of the constraint of

reputations is one aspect of this. The Victoriums, like ourselves, destroyed reputations, they coaked the books. They massively, as we have done with them, inflated some and diminished others.

Fram the 1870s, for exumple, an dicted to rescue the reputation of Robert Owen from the ablivious and distortion to which the mili-Victorian record and already consigned him. In the twentieth century we have done much the same for the 1870s.

Lyon Playfair is a gaud example of someone who ives relegated to the margins. Playfoir's role in drawing the unention of the Taumon Commission in 1867 in the raumon Commission in 1867 in the success of Britain's campentors of the Paris Exhibition, and therefore the need for better scientific education in Wittain, has been durifully ropoated by educational historians, but it is almost the only part of Pluyfolr's newvices that have been.

The ub.quitous Playfair

You will find him in his of history about the Science out Art Department, and an occasional doff of the hut, a mode to him as the great cheme t who contributed to the science education movement. Ho is in countless lists. And thut, shomefully, is all. Yet in the 1870s Playfair was a vital figure in educational discussion—one of the sanest and acutest malysts of cancest and acutost malysts of education of every level, making his presance felt in the cause of education as well as of science.

In 1870 he delivered a powerful In 1870 he dolivered a powerful oddress on education to the Social Science Association, describing the Education Act of that year as no more than the "beginning of a mighty work." It the same year ho published lectures on primary and technical education, agoin indicting Eogland'a "iniserable earicature of an elementary education."

lostory of reclinical and reientific Cducation

The pount is simply that educa-tional and social historians, like all other hinds, operate criteria of relevalue, and have no hard core of Their data and silences are onlyments. They are making only ments, and using other people's tren as they get on the bus to the miser sty library or the record

There are many levels of ambiguity in the word "relerance". On we mean that which was relevant in the 1870s, and if so on which Athenians or non-Athenians? Or relevant to my desire to explain the present and act in it? We generally use rele-vance in this last sense—that which has been for the control of the co s value for our present morives,

has value for our present motives. Radding the past for such a purpose has its place, since there are asperts of what is relevant to us move that were not su to the actors at the time. How well did we, as partlelpants, judge the "relevance" of the jet englie, or the contraceptive pill, or the Merry "Heat, or the creation of OPEC, ut the time, and how does that criterion of relovance match up against their relevance to the historian or to all of us even a decode or two later?

Ilm simply roiding the past is not understanding it. To use suippets from the 1870s to illustrate how much or how little things have changed is reasonable enough if we wanted how limited is the aversion. resilize how limited is the exercise. In 1877 far example, as in 1977, education could be described as a suntaward recordsome subject.

After the battles around educational statistics in the early 1870s, the Satterday Review could feel that "rias, there is na langer that divine flame within us which once leapt up round a row of figures, and made a halo raund every derinal point". No daubt when our awarment buttles around examination results and standards have subsided, the press will ugain find the subject

testills and standards have subsided, the press will ugain find the subject weatsome, and the dirine flame will once again burn low.

All of which is quite a different need of history—and using history in traine to a similarity or a different paller or a suppose a case over the contract of the suppose a case over the contract of the suppose a case over the case over the case of the suppose a case of the case of radicel case, does not make a man ninc or less radical. But I do not wish to polar not occusing a finger at the selective use of history as o resource. We are not, ofter all, bland, neutral people. We have views that we could be for an all. views that we stand up for, and we look to the record to help us.

This is one use of history, and we may learn little of the past biraugh it, getting partial and faulty messages when we imagine that we have get them whole. The job of the social bistorian in particular seconds to the constantly to seems to me to be constantly the contribusive that oftenthis to explain and huttress the present may actuably confiler with attempts to number-

stund the past. In tholog so he or she needs to look for help to the social sciences and especially to sociology, since, with all their controversies and confusions, they can at least alert and the ways of seeing societies and aspects of society, in their complex-ities, their self-intages and their notions of relevance.

escaping from on absorber concern with the state and its institutions.

There was no consensus about the nature and extent of the powers of the state in the 1870s any more than the state in the 1870s any more than the published lectures on pulmary thore is a century later. Historiums have different perceptions of the state when they grapple with the state when they grapple with the cancelland and indicting Eogland's "interest of the cancelland of an elementary of modern institutions. Including state-supported ellucation."

Two years later he was publishing the later of the past of the past of the past of the cancelland of the cancelland of the past of the pa Adding bits of information about

30000

Master of the fleeting moment

The Centle Burbarion: The Life by V. S. Pritchelt Chatto & Window, £5.95 ISBN 7011-2208-0

Turgenev's life has attracted biographers us much, one suspects, for the corious appeal exercised by for the appeal of his rapotation as noss. the first Russian writer to achieve European fame. His life has the same charm as his most famous works: a rich setting, an air of civilized living, a theme of most civilized living, a theme of most setting and the micros in The Living Novel while keeping all the case and nearthe first Russlan writer to achieve civilized living, a theme of an-

Turgeney the unat, the "gentle barbarian", as V. S. Pritchen has chosen to call him, who exerts the rare appeal of a gentle, wonderfully clvilized intelligence surung framea harbarie, semi-medievol past and yet unifying, by his genius, rhe clvilized intelligence sprung from a vigour of the Rassian barbarism in his work. with a sensibility both gentler and with a sensibility both gentler and deeper than the native European, clearly defined periods, each of the more precise, Turgenev's which is governed by the domin charm for his contemporaries moved ance of one in another set of relationships. His hophoid at Spassacoutone. He could talk as favour raconteur. He rould talk as fascinatingly as his Rudin. He was a splendid utimic and he had a delightful wit. All of this can he discerned from the mute witness of his thousands of lettors. Rut Sir Victor has to admit: "Blography has the fundamental weakness that it can rarely tell us what was said or onsaid between the parties; it is a novel without dialogue", and such absence of dialogue, and such absence of dialogue, it is missing from the missing from the fundamental weakness that it can rarely tell us what was said or onsaid between the parties; it is a novel without dialogue," and such absence of dialogue, and such absence of dialogue, but the period of Turgenev's "plunge into the German sea" and his friendship with Barkonin. This can be designed in the world and by his portrayal of the world in all her with the factor of a mother in all her without the period of Turgenev's "plunge into the German sea" and his friendship with Barkonin. This can be factor of German fillogue of Turket is not interested in ideas and teating to volce, is practically to a mother that is missing from the mother of the world of the world of Spassage and by his portrayal of the contains of a mother in all her with the period of Turgenev's "plunge into the world of splendid utimic and he had a delightful wit. All of this can he discorned from the mme witness of his thousands of lettors. It is Sir Victor has to admit: "Biography has the fundamental weakness that it can rarely tell us what was said or onsaid between the parties: it is a novel without dialogue," and such ubsence of dialogue, of voice actually speaking to voice, is uractically splating to voice, is uractically splating to voice, is uractically speaking to voice, is uractically speaking to voice, is uractically splating to voice, is uractically splating to voice, is uractically splating to voice, is uractically speaking to voice, is uractically splating with Bakonin. This comes uross more palely, for Princher's own blography, which in other respects himstally splating to voice, is uractically splating to voice

which has appeared in the last Itt or so years. New majorial avail-able in the 28-volume Soviet Palgape Turgener's hingraphy a pressing uced in the near future. Princhett's his 40-year relationship with the famous singer Pouline Visrilm as being free of that kind of sedute-

civilized living, a theme of unrequired live, and always, always, a sense of life's preciousness, its fleeting heavily and mostalgia for its passing.

But the life does not exist without the man and it is, of course, Turgeney the man, the "yearlo literature."

This may be old fushioned, hur the freshness of Prijeheit's manner never makes it seem so. It is h fine, rather, with the elegance, leads



Turgener aged six.

vivals, finally, in the 1860s, Tur-genter becomes a neighbour and inseparable member of the Viardo family, a financial prop, substitute father to the children, especially Didie, and, in the last years, Panline's more in less sole concern, the object of her devoted nursing and perhaps—such is the callona-ness of history—the unly reason why we commuter her nt old.

All of this is told here with great sympathy and fact. The atmosphere of the relationship and its rhanging climate emerges fascinatingly like the slow anvelling of some splendid impressionist entiring. In which with impressionist painting, in which only the dotal is vogne. Pediaps Pathing herself is a slightly infured figure. The genev's is not: it has the substantial part of the substan figure. Toegeney's is not: It has the aukwardness, charm and strength of the Ruselan's feeling in full measure, the physicality of his presence and the man's inhevent like-nhility. It paints Turgeney into the picture more affectionately and sensitively than does any higgraphy to date.

"Unw naturally he enteles the moment between naticing and not noticing. This, one says, is where his art lies; and simply in seeing, here in the same says. Trugency became lovers it have been briefly and wife hat in the waywardness and time-lessness of seeing. Seeing is like light and shadow, playing neer what is seen. Things seen are exact

yet they flow away or are cetrieyed: the past and the present mingle in a clear stream. There are two mas-ters of scelag in Russian literature: Tulstny and Turgeney. Tulstny sees exactly and Turgeney. Tolsiny sees exactly as if he were an animal or a hird; and what he sees is still and settled for good. He has the pride of the eye. Turgeney is also exact but without that decisies pride: what he sees is already changing. In one of his letters be quotes with admiration an image of flyron's 'the music of the face'—the unrement from nate to note. the disappearance of the thing seen

The linking of the visual to the musical in the elaboration of Byron's image summarizes very well the brical appeal of Torgenee's observarrical appeal of Torgettev's observ-ant eye and limpid style. There is uniscallity in his writing that is absent from 'Tolstoy's, though Tol-stoy's style can "sing" well enough. To genev's descriptions of nature demonstrate a depth of feeling and a depth of seeing that is un the whole rare in enoivalent massages in whole rare in equivalent passages in Tulsiny. And he could, as Pritchert sit rightly says, apprehend the changedd's of what he sees whereas Tulsing had to be fixed in his landing.

The biographer and the cribe are always close to each other in this study, but Pritchen decrees himself study, but Pritchen devotes himself rupariously and scrapalously to the divelopment of Turgenee's work, the evolution of the brilliam writer of Sketches and short stories into the "dispassionare, undifical novolist who watches political fdeas as they filter into individual character." This process begins, of course, with Rodin Each of the six uncels receives perceptive scrutiny which receives perceptive scrutiny which helmbes neknowledgement of their play-like structure and apprecial of the virtues and defects in the characterization. In doubing with Smoke Pritchen has many percipione things to say and when he traines to the likely biographical truth of trina's seduction of Litving he seems to be guessing at more than a probability;

Perhips the relationship with Panline Vinciant is important for Turgenev, the writer. What is not appear to doubt is that the special quality of Turgenev's strength as a writer, his parguant sense of life's evanoscence, is discernible in his work from the very beginning. Principle in users of the senses, that stamping foot, those tears which ore not

Cautionary tales

in discussing the later and the later and the Chemical Laboratory.

In discussing the later and the edition and Torrents of Spring, in The Chemical Society, £7.00 shows a keener awarenes of Spring, in The Chemical Society, £7.00 shows a keener awarenes of the cardler work. This is before the earlier work the part of Santin's seduction by B. ital hazards to be one there, apart of Santin's seduction by B. ital hazards to be one there, apart of Santin's seduction by B. ital hazards to be one there, apart of Santin's seduction by B. ital hazards to be one there, apart of Santin's seduction by B. ital hazards to be one there, apart of santiners, especially of his p-with such substances as concentration in showing us the fatal impression hat glotous, ether and the like.

Turgener is supported by the fatal impression the fatal impression hat glotous, ether and the like.

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HMSO to use the hook without o to use the hook without of the treducing, and I recommend for all present and proved to hook the recommended first words without being cryptic, and they did not pass too meny bocks by multiple cross-references. From the total information and they did not pass too meny bocks by multiple cross-references. From the these items other impressions had been obtained, not least from the diegrams. These are not onduly numerous end have a slightly older the other principal time. They are allegrams, not pictores, but it could add to retail for the cut-away-vlaw type is absent. Some sheaway are poorly

Biochemists at work

leagues have contributed in this volume published in his honour. It was the editors' and other contribute of intervious to produce not just a conventional biochemical feature. Schrift has a methal a methal and the contribute of important part, in biochemical features the first product in the contribute of important part, in biochemical features the first part of interded by the first part of the first par

brain tissue. Ten years later at Washington University in St Louis, Ochou and his group discovered, isolated and crystallized the "condensing crizone", may known os citrate synthuse, and charlified the "Condensing crizone", may known os citrate synthuse, and charlified the "Condensing of Selection of Se mechanism of entry of "netive ace-tote" into the pricarboxylir acid cycle. In 1955, now at New York University, while investigating the merhanism of uxidative physphory-lation (Ichna, together with Marl-anne Grunberg-Manago, discovered

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Severo Ochoa, the distinguished Spanish binchemist, was 70 recently: some 50 of his students and college base contributed in this leagues have contributed in this

or conventional biochemical least scherift but contentional biochemical least scherift but contenting much career; a collection of essays with historical and autobiographical flavour, reflecting not only the development of biochemistry has also the thoughts of some of its developers on topics related to Severo Ochoa's scientific tensors in piece of textimol; biochemistry has also the thoughts of some of its developers on topics related to Severo Ochoa's scientific tensors in piece of textimol; biochemistry into a controlling theilless. for this endeavour they seem to have succeeded brilliantly. It is at once abvious that the group of Orbea's past and present students and collegenes comprise a substantal collegenes comprise a substantal apparently. But the ways clear apparently not to ways clear

have succeeded brilliantly. It is at once abvious that the group of Orbad's past and present students and colleagues comprise a substantial part of the biochemical community and also that, mer the years, he has been associated with a wide spectrum of research, inostly with legy problems of the time. Accurdingly, the essay's fall into seven chapters: energy metabolism, photosynthesis, fell most synthesis, fell most synthesis, cell wills, regulation; uncleic acids and the genetic code; protein biosynthesis; cell biology and neurobiology; and science in the time of Deboa.

Severo Ochoa's main contributions to hinchemistry have so far centred an three main areas: oxidatly phosphorylation; the enzymology of the tricarbuxylic ocid cycle and related metabolic pathways; and the enzymology of nucleic acid synthesis and studies on the genetic code; oxidative phospharylation in its various aspects has continued to oxigy a central position in research on metabolism; the mechanism of the process is still controversial and subject in much work and discussion. Around the vear 1940, Ochoa in Haford, Lalckar in 1940, Ochoa in Haford, Indiantory ochoa in Ind

Overall this book is very rich, like a good Christmus pudding. Boy, horrow, beg or steal it (the paperback price is vory modes) but read it and suvouring the essoys, find your own favourites. You will not regret it.

A. W. Flegmann

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actual choice of material for transite letton.

The great trouvaille here is undountedly Rimbaud's Drumken Boot. The story of how this translation— indeed, both volumes contained by Dr Ismes Knowlson in a note to this edition. Now that we are oble to read the translation, we can see how much would have been lost to modern literature if the only survivaling copy had disappeared. Beckett in allogether fitting that his public the early thirlies when he was completely hroke; one almost wishes he had been destinute more often, for. As for the more serious and in weighty Ends: these consist of three in plays which have been given et the drough Court Theatre in the past the four years, Not 1. Time and Pacifalls. The other two plays are

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Asking the right questions is still, of course, what makers; but historkins are spending more and more of their (dwindling) research time trying to find out where to gu for the answers. It is of this point in their activities that series like Dr Cook's can be invaluable. There is little these releases

mane, it short account of the parina-mentary career and then such infor-mation as has been gleaned about succiving records. In general, the names are disappointing, Members of Parliament have so much chiller offered in volume (Evestain) beneght some light relief and I enjoyed the subtle modulations in "Grant of Monimusk, Lady, see Twyedsmair of Belhelvie, Baroness", but for the

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Anglo-Welsh poetry

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Welsh-language paetry is further complicated by the problem of way and it is welcome news that what is and what is not available in acceptable translation. Drawing upon deposited at Hiemingham University Library, just as it is mutalizing that Lord Home has kept a diary (very classed). Indeed this excellent cam-silation and deposite the control of the c Authory Corran and Professor Gwyn Williams, Professor Gwyn Jones rightly lucludes a number of Michael Bentley | his myn ministrations | his myn welsh. To have brought together in one ridume the work of the must accomplished translators, and thus to have affered such sense as Is pussible in translation of the splendoors of Welsh poetry from the sixth to the (wentieth century, is it

useful achievement. When one posses to the repre-sentation in this book of the original English-medium poetry of Wales tosiensibly much noire amenalde ta representative selection, mul still lacking an anthology covering the whole course of its existence), motters are otherwise. As well as being a distinguished translator from the Welsh, Professor Jones is an authoritative authologist of the Aughe-Welsh chart story, and a memorable practitioner of that form, Aughe-Welsh metry is out, however, a field in which he has specialized, nor would his none occur to most a field in which he has specialized, nor would his unno occur in most readers as that of a pact. An urbitrariness is cridout in this mathaling. Its Angla-Weish representation starts with High Holland of Denkigh's sounce arcfaced in Slankespeore's First Falto of 1623, thus ignoring poems written during the preceding 150 years—Weishmen wrote pacins in English as far back as 1470.

The Anglo-Welsh poetry of the seventeenth, eighteenth and uine-teenth centuries affers mutetial far

Deadlier than the don

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but two of which were to be found in the young Indy and the can only to got which the cumplete flection af C. S. Lawis—If we set is beside the following India to the Chronicles of Narnis, Till W: Hard Foces, and the haly science flection it flows and the haly science flection it flows and the haly science flection of the following flows in the flow of the first and anxieties of the following flows in the flows in

particularly interested in other people this Dr Weston is a mere pupper compared to Milhor's Salam). Which perhaps lies lichted his interest in "other world." In the Narma hunds and the rijony. other corlds offer exciting literacy possibilities for those who have litthe interest in other homan being, and they coulded Lawis to plander the limit of literary rousiner the limit of literary rousiner which he had read so what ingly. But where romance is kept in hay, as in these stories—which are sto-diously "drah", not "guider" there is outline to constitute the there is nothing to committage the absence of characterization or the testian of his prose style. As Lewis write in his hispolaction to Limb say's l'appige to dictacus: "to con-struct plansible and maring other worlds" you must draw ou do wolworlds you must draw on the note real 'pilier world' we know, that of the spirit". Unfortunately, it is the spirit of a particularly stuffy Oxbridge senior common room, that permoates this volume.

Unlike the Narnia chronicles and the trilings, the staries in The Dark Tower have in theological axes to grind—but this does not make leenth centuries affers mutetial far the dehote which most anthologios inevitably arouse ahout poems included and paems omitted. That omission of Morgan Llwyd, Ehen any more entertaining tor's phrose). Rather the reverse, for the annalgant of mistalgic factors phrose and Sir Lewis Marris, and the inclusion of Sir Churles Honbury Williams and Emily Jone Pfeiffer, ore cases in point.

It is, however, with some aspects of twentieth-contory Anglo-Welsh pacty that the issue of arbitrary representation—both of poets and of the phase was at a premior, the tangential welshnoss of Edward Thomas and Allies.

space was at o premion, the tangentiol Welshnoss of Edward Thomas and Wilfrad Owen might have counselled their omission from such an anthology. The quality representative value or welghting of ot least five later Anglo-Wolsh poets, is open to serious quostion: Who most observers of the scene would feel to be beyond dispute is the claim to inclusiou, as agoing these of three contemporary poets of much more substantial achievement—Harri Webb, John Tripp, and Anthony Conran (id his own right os a pace), yel the anthologist himself, who is not known as a poet, gives three pages of the hook to verses of his own, while omining these three pages of the hook to verses of his own, while omining these three pages of the hook to verses of his own, while on mining these three pages of the hook to verses of his own, while on mining these three pages of the hook to verses of his own, while on mining these three pages of the hook to verses of his own, while on mining these three pages of the hook to verses of his own, while on mining these three pages of the hook to verses of his own, while on mining these three pages of the hook to verses of his own, while on mining these three pages of the hook to verses of his own, while on mining these three pages of the hook to verses of his own, while on mining these three pages of the hook to verses of his own, while on mining these three pages of the hook to verses of his own, while on mining the mining the mining the hook of the mining the hook of the ho "The Shoddy Lamk" records the borrifying experience of on Oxford don who finds himself trupped cuside the mind of a young

to death, in the Troy of Lee's Philosophy of Heligian face that launched a Bernard M. E. Heardon all, is seen 10 years she had been all, is seen 10 years she had been all to the beautiful and the see of the point while in the deligion. Truth and Longuage the young ludy is so the parick Sherry about sex.

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thin and his followers the ethical oro for its application in law and thics than as an end in live and thics than as an end in likelf. The fill philosophy of Bencham and the was notable, however, not a for its utilitarian fromhallon laso for its minhod of mallysis. It "malytical jurispendence" a disinctive contribution appropriate for free contribution appropriate for free contribution.

the sweeping success of analytic Nevertheless Harr's work has

Never blokes Harr's rank has played an outstanding part in the remarkable recent development of Europy, the bas soully been mural philosophy but in the great days of Hendrich and his followers the ethical

In this festschrift for Hart several of the contributors pay their respects by the time-lumnured method of criticism. They include P. M. S. Bucker on methodology and rules, G. P. Boker with an acute examination of defensibility and authorization of Actions P. Lusza and authorization of actions. and the substitution of inferentiality and self-evidently good.

I construct the self-evidently good.

I constructed self-evidently self-evidently good.

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Two essays flow from earlier criticism of four by his successor in the Dafard Chair of Jurispruds ence, R. M. Dworkin. Geoffrey Morshall effectively attacks a right known paper by Dworkin on the function of Judges, while Dworkin by Innering the Assession of the wiew, A. M. Honoré and R. S. Summors conster the expession Summors emoter the excessive abstracelum of some philosuphers by describing fentures of low as it exists in fact, by statistic vein Si Rupert Cross shows the unreadity of logical points raised in academic discussion of the House of Lords resolution on the House of Lords resolution out to be always bound by past decisions. Logical argument of the same character is used by J. M. Flouis in matther essay to each the conclusion that partly in the conclusion that the conclusion. reach the conclusion that truth self-evidently good,

Realism and relativism

Patrick Shell 128 8 521 21425 4

with premises known to be true, chile the furmer covered matters common to all kinds of knowledge, like fundamental uxiams and definition, and started from propositions which has a been a form, by genus which it is connected with Aristotle. It is connected with Aristotle is the another. It was a method by which true premises might in the end be discovered.

The fundamental insight of Aristotle is the part in its pilace his own districted discovered.

The fundamental insight of Aristotle here is that we most districted discovered whith Aristotle here is that we most districted discovered whith an order is the property of the spilace his pr MINAMULAN

gistle; the latter was appropriate to to he good, and to noglect either the special sciences, like mather loads to parodox. Again, any definitional sound medicine, and storted thou may be useful if it is intelligible with premises known to be true, in those to whom it is offered and

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Taking religion seriously

However, Hegel was equally far be said of some from meaning that everyone ought to adopt Christianity because his argument showed it to be the best.

At the conclusions on some same in some set of the conclusions of the conclusions of the conclusions of the conclusions of the conclusions. At the conclusion of his converman often united passage, Wing
genstein said that philosophy should
be are everything as a rest.

Hegel's remarks about the tiwl of
Minerra only thying when dask is
falling make the same point.

Philosophy can only describe a form
of life, not try to interfere with it
or shouge it. Forms of life can only
be understood from within, by those
who participate in them. Hegel lived
in a success of the milk of this interference of the convention of those images
who participate in them. Hegel lived
in a success of the milk of this interference of the convention of those images
who participate in them. Hegel lived
in a success of the milk of the content of those images
and thus how religion, in the last
resure, coincided with philosophy.

Wittgenstein would, I think, have
felt legel was mistaken in this part
of his aim. And yet there are many
similarities and search and search and some last there are many
similarities and the contents of his aim. doctrines; these were the only language in which he could express insights. In a sense, his claim for its status cras a rantology, for if he could have envisaged a better religion, he would bure had in

But, as Reardon slaws, Hegel's Christianity is not simple, nor is it the faith of the man in the street. As the faith of the man in the street. As many other philisophers after him have found, stanements like "faid exists" have a different higical form from those about the existence of ordinary physical objects. This means, as Wittgenstein agreed, that it was simple-minded of scientists to argue that new discoveries had disprayed the existence of God, or shown that religion was in any one takes religion seriously. Perhaps shrayer me existence of Gan, or shray that religion was in any cay irrational. But the arguments which make this point can ulso upset unive helievers, who think that part of their faith is being taken away from

localise one of the points that those whin follow Wittgenstein emphasize is that one is not a customer at a religious supermarket, selecting whichever taith can best fill ones unords are whichever has the host till ones unords are whichever has the host till ones to contain the selection of a phase the entire terms of the description of a contained are whichever has the host time ones containts the selection. whichever faith can best fill one's needs or whichever has the hest record on verification of its truth-claims. For what would anyone need a religion for?

Therefore, Hegel was equally fair forms around that programs and its followers.

At the conclusion of his converof his aim. And yet there are many similarities, at a deep level, hetween their respective procedures,

Their respective procedures.

It is a pity that Reardon and Sherry had my diseased their lands with each other, for attention in these deep similarities would written. This offer Reardon is constitute. This offer Reardon is constituted in expound Hegel architecture in the issues he was grappling with arc still live ones and ruise central hilosophical when any suphisticated philosopher takes religion seriously. Perhaps the aya books should be read

Anthony Manser

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To the more pressic of his readers, much of Stephen Clark's message will oppear pretty flotty. He is more prepared than most of his courage and boos with gennine "language", dismissing Jonathan Beauer's arguments against Frisch (in his Ratiunnfity) as more against rationolizations for vulgar "specie-ism". He also suggests that our assumption that we cannot enter into serious sorbal relationships with suimuls is a form of intellectual and moral idleness—animals communi-cate with one another, so that they

flinch at the thought that his views may strike his opponents as someichai cracked. For he thinks that the meat-coting, unimal torniring nrthodoxy really is propped up by fantasy, wilful ignorance, and something close to a psychotic hatred of the physical world; and he is at least partially persunsive.
If we think that the ennecattation ourselves in the universe in the first place. Eating ment is not, on this view, simply a practice which infligation notal considerations condemn not of hand; it is a synoptom of a degraved, alienated, and in the last unpulysis, mad, attitude to the

At the attilisation level, it is, of a niche in which we exist without course, true that much of our damaging the other occupants. And to see the world in this sible. If, for instance, we are keen long way itemands a return to the course, true that much of our recomment of animals is indefenrecomment of animals is indefen-sible. If, for instance, we are keen sible. If, for instance, we are keen to stop long concer, why don't we simply impose a ban on cigarettes, rather than spend millions of pounds giving the disease in experimental animals? Than is, if you take the utilitarian objections to causing nunceessary suffering seriously, it is only by doing some quite implausible fiddling with the felicific calculus that the humon desire to inhale smoke can justify the unio infilited an animal. The have as good feasons in suppose us doubt beasts as we have to suppose them such. Even those of as who usually profer the company of our cats to that uf our calleagues might draw bock from the conclusion that we should take relationships with the former as seriously as our relationships with the latter. His enthusiasm for minuals' family,

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or more drastically, their reproductive lives induces in him scruples adomt the contraceptive control of animal populations which will seem for-fetched in those of us who put down the gun and the fly-spray with some reductance.

The Clark will not, it am sure, flick without causing pain.

This sort of objection to utili-prian defences of carnicortus habits—familiar enough in all sorts of contests, and leading to the onof contexts, and leading to the an-pulsiable conclusion that we ought to est human bubies rather than fully grown cows—yields two results. The first is that our dis-quiet with such utilitarium argu-ments shows that we are not atilitarious but specivists, the second tion, what is so special about human purposes in a world shared with all sorts of other sention creatures? What makes Stephen work, was so can fif from proper human responses that he was more or less mad, then, what about mut offerely the slanghterhouse worker, but the scientist who busily breeds cancers in experimental animals? And what about the rest of us, who pay them to terrify multiple workers are in the world and our place in who pay them to terrify multiple with hard done in which makes everything else increase in the content of the content of the content of the world and our place in the content of the content torment creatures who have done merely a means to our ends, and a nothing to deserve it? sninething very like a religious con-

Admissible statements

Madalities and Counterhy Hnns Reichenharlt Uniccesity of California Press, ISBN 0 520 02966 6

In treemieth-century philosophy probably rhe must influential school has been the Vivana Circle positicists of the tiventies and thirties, who rejected memphysics as literally nonsense and fund knowledge of the world in empirical science alone, in consequence viewing philo-sophy as the critique of science. Having a fundamental affinity with the readitional empiricism of British philosophy this orientation became and to a large extent remains a major force in Britain and America. Although Reichenhach originally

Although Reichenhach originally raught in Germany (and from 1933 in Turkey notil he emigrated to America in 1938) he was, with Carnup, a co-editor of the circle's harmal Erkeouth's and shared its "Ingical empiricist" approach, a fundamental reliance on the new formal logic. The nim of philosophical malysis was the explication, that is the construction of a precise formal definition, of terms used in the description and apprecisal of science. definition, at terms used in the de-scription and approximal of science. One of Reichenbach's concerns was published in work published in 1949 leat which had less influence than Caronp's view treatment—Caronap instigated a research programme

The look by Reichenhach reprinted here was originally pub-lished a year after his death in 1954 Dylik the title *Pomological State*ments and Admissible Operations) and even more failed to make the lapact enjayed by its rivals. The Alan Ryan inquestionable quality of Reichen-linch's writings together with the con-

that communes even now.

A new gospel

timing contrains of his togon.

Reichenbuch's aim is to exist the mation of reasonable long, which we take to delima a professor Phillips here extends over admissible and socrates is a maximum and are stated at expands. Recipion without Explanation and religious interaction of the Concept of Proper stated as a maximum and socrates is a maximum and professor Phillips here extends over principles such as a little whole licht of religious interaction in the Concept of Proper stated as a milied social interaction of the Concept of Proper stated and empirical his armoger thesis is that such philips and complications.

The strategy is to define a specially and factual content: as provising any factual content: and mature, and in term of the class of some and some and content in the class of some and some and content in the class of some and some and the content in the some and the misbading and and the content in the some and the misbading and and the content in the some and the some and the content in the solution of a function of a function mode, the order of the content of Reduct the content in the solution with this content theory mass consider the miss is to personale our provision of a function of a function

have expanded") cas here list.

The greatest difficulty with this is to personale outstanding the grouper theory mast consider the gleds of what Phillips wants to maintain. Can be, could anyone, singuistically this factor is substituted for the saints and futures, annufric notion, but chartically this factor is substituted for the saints and futures, annufric notion, but chartically this factor is substituted for the saints and futures, it is a chartical and grain of the councils and the opinions is net by the first of the councils and the opinions held on straightforward expectations in syntactical and grain of the councils of the councils in the varriors of Islam instances; is almon emphasing to their deaths in Huly Warners, Salmon emphasis for promised paradism the the preferred cultach's theory against the two process of the councils of promised paradism the treatment of the councils of promised paradism the fickering that Occoun's razor favority who takes an unashaned; and or religious may be shown to be superstituted to the treatme

mraned would be factual content.

Again, is a chapter called "Per-

ectives on the Dead", Phillips dismisses those misgoided Homions who think that these most imply "the existence of a world berood the world we know". We are not in this interpretation always events, Phillips allows, But "What we have seen in this chapter is that perspectires on the dead need involve in such inference".

This weaker thesis is not in substance comentions. Certainly some, perhaps all, of the religious arterpermips an, of the religious inter-aures of some geople have lacked, or do lack, any would-be factual relevence. These are, as Phillips would have it, free of all super-stitions content. In particular some people have expressed beliefs in immortality which must up be interpreted as supporting reliat John Wisdom once called "the logically unique expectation" of a future The road to the stronger conclu-

rine road to the stronger contession starts by accepting a Humian critique of the rational fuundations of any supernatural religion: "what flume's legacy shows is that Our explanations, like our experience, are necessarily found within

an external world is justified on

the hasis of its explanatory and predictive power though not by abservation was possibly shared by Lucke blusself, and here the case for

representationalism is less improssive. Hypothoses testoil by the

hypothetico-deliverive method which Jackson invokes in pince of induc-

Jackson invokes in place of induc-tion must, no less than inductive generalizations, face the court of experience if only in their singular implications, leaving the original criticism very much alive. One may wonder whether the issue really is restricted to a three-cornered fight between realism, phenomenalism and representationalism. Probably not and leaveson's work must raise

not, and Inckson's work must raise doubts about the success of all

Antony Flew

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Languogo: A Theory of Home Heality and will surely furce to the posteriology of mind the bulk of Jockson's case is not mark one in farour of sense-shara in the bulk of Jockson's case is not mark one in farour of sense-shara in the bulk of Jockson's case is not send one in farour of sense-shara in the bulk of Jockson's case is not send one in farour of sense-shara in the problems of privacy, avowals, other minds, etc.—will find little there given editoral emphasis on the interpretation and description of mental processes, needed of mental processes, needed

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The short reaction of the state Darida has been hailed as the and main currents in twentieth the practics justifiable; if so, for most important philosopher in the practics positive philosophy, such as the cantury philosophy, such as the what teasons?" The complex important philosophy, conting and writing his notion of de-Angle-American philosophy. Conting a standard by absolute that the practics positive philosophy is a standard by the country and talk to the practice plants in the practice pushible; if so, for most important philosophy. Conting the practice plants in the practice pushible; if so, for most important philosophy is a solution of the practice plants.

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Logic for Reality

Worlds, Times and Selves by A. N. Prior and Kil Fine Duckworth, 67.95 ISBN 0-7156-0822-3

This cullection of papers completes the publication of Archar Pring's philosophical writings. It contains the first and only finished chapter of a work which was to be colled Wnrlds, Times and Selves, some pul-

The work as a whole once again manifests Print's rere gifts of logical ingenuity and philosophical insight. A full and technically adequate review of the book is noviously out of the question here. But it should be possible to consider in a very general week the two main problems. eral wey the two main problems which Prior poses sod the solutions

The first problem is logical. It is the ecolyse a number of compet-ing togical theories and to exemine is the soolyse a number of competing, logical theories, and to exemine the logical theories, and to exemine perticular to determine, which of these eyestems, if any, can be regarded as primery to the sense that the others can be interpreted by, or embedded in it. On a less general level, problems of this kind hove for some time been familiar in mathematics and physics, for exomple, the problem of the relation between Euclidean geometry and non-Euclidean geometry and non-Euclidean geometry and non-Euclidean geometry or the problem of matter distributed continuously through space and amorber conception according to which matter is connected with discrete points.

The principal logical theories analysed by Prior are first, the socalled "classical quantification theory", i.e., roughly speaking the logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens; second, model logic (lower logic employed by working mathematiciens) and logic employed by logic employed b

THE BELLEVIEW BY THE STREET OF THE STREET AND THE STREET OF THE STREET O

malysed modal notious of neces sity, passibility and impossibility and thirst, tense-logic, i.e. classico quantification-theory enlarged by the manulysed temporal antions of

present, past and futore.
The solution for which Prior organs is that not only do madal and tense-logic trivially contain quantification-theory, but that each of these systems can be turn be interpreted by quantification-theory --provided that its the former case one allows the individual variables Worlds. Times and Selves, some published mut impublished muterial falling within its scope, and a postscript itogether with a technical appondix) by Professor Pino. Ills task cannot have been ensyoned he deserves our gratitude for his editorial care, as well as for the postscript which explains Prior's position with admirable clarity and develops some of his ideas further.

The work as a whole once again manifests Prior's reregitts of logical ingenuity and philosophical insight.

A full and technically adequate review of this editorial appondix to range over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he and Fine admit in the latter case over instants of time. Prior as he an

Prior's second problem is meta-physical. It is to decide which, if eny, of the competing lugical theories considered is ultimately true. His non preference is for a modol-cum-tense-logic because such o system alone fits what he accepts as Reality, nomely a world in which naly octuol and present objects exist (i.e., no empty instants of time, no proceedings as the company of the

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A selection of outstanding. philosophy

The Roots of Reference takes new life into Locko's doc-will ard Van Orman Orman Companies and the best general defonce thought the best general defonce thought to much the revivation the sense datum theory.

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Even trivial explanations are better than nothing, botter than that tormenting and tormented concept of "chance". Most of science is based on the idea of cause and the predictability of events: that in principle, if all relevant facts are available it should be possible to principle, if all relevant facts are available, it should be possible to work out what happen. But mothern physics says no and even mothern biology is beginning to wonder. Evolution—our evolution—is built on Derwinian natural selection of "chance" mutations; we see the products of a series of random happen-ings; we feel all the time. that we have a purpose (our owa "free will", to say the least); out scientific aim is to undorstand, but what we discover as a result of our purposoful researches is thou there is no predictable pattern, no interpretable "meaning" in our lives . Or so, at least orgues Mound in his monograph Chance that the conditions for the evolution of life itself would be expected from the main important source of the conditions for the evolution of life itself would be expected from the conditions for the evolution of life itself would be expected from the conditions for the evolution of life itself would be expected from the conditions for the railer articles on the main important source of the conditions of the conditions for the railer articles on the main important source of the conditions for the railer articles on the main important source of the conditions for the railer articles on the main important source of the conditions for the conditions are conditions. thesis as he explains it, is to have arisen on many orcssions that "the biosphere dues not contains a predictable class of objects or of ovents, but is a portion event, certainly compatible indeed with first principles, but believing this, nor is the organical minimal product of the principles. indeed with first principles, but believing not deductible from those principles original. and therefore essentially impredict. Some of the essays Iralled ublo". One of the corollaries he chapters) in this little book, eg, draws is that the acolution of life those on speech and constinuous is equivalent to having been sinuous and an the molecular bosts of

iffe.

It is a measure of the fundamental difference between the two approaches that Schuffeniels's attitude leads him to conclude, in direct opposition to Mound, that "we are here becomes about three willow years ago conditions on a manner which illustrates the earth and the properties of the elements were such as to ensure

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These pepers, writish over the past querier century, reliect the development of a mind consistently end pestionately devoted to a philosophical undersiending of political life. The relations between public and private life and among ismity, properly, and modernity are explored in the context of liberal commercial consists. Consideration of economics, ideology, radicalism, ellenation, and the moral bases of public policy compatible reader to think and to reihink.

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But what is the Issue? There is

an important source of confusion here, stemming from what is meant is "chance" and some ambiguity in the way Mound uses the confept. The two extremes of meaning, rerngaized quite specifically by Schoffenlels in the preface but not pursued, are: 1 4... the result of coincidence of diverse independent that of the preface of the prefac chains of causality " and 2 ", the more fundamontal runcept us proposed by the Danish school of physicists" freferred to by Manadas "radical rhance"). The difference, however, is critical even if the targething cite, however, is critival even it is has to be admitted that everything is a matter of probability in the last resort. But it is a question of 99,99 per cent probability as against a minute fraction (say) D.IIII per cent above count odds and that is equivalent to there being an all-or-none degree of predictability. It is on this issue that Manual does not on this issue that Manual does not really make himself rieur, though he chints to concern lumself with both types. On definition 1 it is entirely a question of knowing the relyvant facts; they may be diffirelevant facts; they may be difficult in alitali and we may, therefore, he mashe to predict accuracy
in procise; but he is not, in prinriple, impossible so we should not
imply the lifea of philosophical
chance to such a situation, even
though in practice we can only
make valid statements statistically.
A life insurance agent can, for
instance, consider a population of
1.000 persons spect 75 years and predict areuritely what proportion will
be alive live years leter. But be
will not be eally to predict which
individuals will survive unless be
known their sex and a greet deal
about their sexte of health, thaic
family histories, etc. Ite may never

will be lils estimate. On definition 2 however, it is mslittaloed that statoatents cen only be made statistically. Single electrons or atoms reflect the impact of single quanto of energy and lot that respect have no individual existence (see p 34). It will be possible to state that 50 per cent of a sible to state that 50 p mslutaloed that statements can only be made statistically. Single elec-

able for exactly the same reason, . . . that the particular configuration of atoms considuring this pelble that I have in my band is unupredictable. But what we want to know is who it is unpredictable. Is In herause it is impossible to know all the contributory oausal factors? Or is it herause there are elements involved that elements inevitably involved that ore, by their nature, insusreptible to rausal analysis? And similarly we want in know whether our origins are a reflection of isalated events which runnot he measured or enalysrd. We feel like this because we are rindowed with a great desire to manipriorie, is does not matter how dif-licult this may be as hing as it is, in prioriple, possible. But when it is organed that certain familiar natural phenomena are intrinsically impossible to onlyse or reproduce, many of us, along with Schoffeniels and Eigen and others, seek to rehel because it is like a denial that we exist at all. That, however, is simply a natural human reaction; it is not a rational argument. We should, and can, do a little better to one arelicit.

Returning to Mound's usu of the concept of "rhance" mulations, we find him isolating, so to speak, what he tokes in he a phenomenum of "tudical incertainty" from subsequent evonts (e.g. natural selection) without which the "rhance" phenomenon with have no impact whatdenon would have no impact whatever an blological development.

"Pure chance", he writes, "absobately free but blind list at the
very root of the supendons califice
of evalution." A mutation is in liself... a quantum event to which
the principle of impressintly applies
... at event which is hence and by
his very nature essentially topore
dictable". Even if this were true
(which is questionable) it would
have little significance notess it led
directly to a number histogical
change; but this it round do without the specific "sieve" of selection. More mislending still is his
statement that "It is known that
the structure of the antibody owes the structure of the antibody owes unthing to the aptigen". The slin-ation here is riosely analogous to Darwinian evalution; cells produc-ing the "right" (i.e complemen-tary) antibody for reortion with the contigen. (out of a luge range of other cells producing a range of non complementary types of onti-bally) ere selected for reproduction by the presence of the untigen. It is not therefore true in imply that the "attracture of the sutihedy" (as it is produced for effective function in large quantities in the budyt "nwes nothing to the onligen". Nor is this simply a question of sementirs. family histories, etc. Ite may never schieve cumplete certsinty, but the more he knows the more correct

sible 19 state that 50 per cent of a specific antibudy, to be distinct of calleactive, suphure to discuss, for intersocs, will have distinct of a specific antibudy, to the specific field of choractive, suphure to discover conditions which would the li us which individual atom will explode next.

There is, howover, a possible sort of intermediate stets between the two types of chenca and it is this which I auspect Monod may be mainly talking obout: namely, where eventiallies mutations ero not really due to "redical chance" (le type 2), but are caused by an environmental swent (o.g., the presence of a chemical mutagen) effecting a base chenge somewhere in the DNA chalu, the result of which boars no reletion to the effect in the DNA chalu, the result of which boars no reletion to the effect into altered protein, on bow the mutation of a population of organism, adaptive (Lamsrekich) nor biological on the individual organism, adaptive (Lamsrekich) nor biological challed to its ceuse. For

The supposed fundamental! tion hetiseen an instant mechanism (moulding of a in naturo where "change at outer in, and a "teledise" of mism (survival of one type to many—ull arising by the busically a question of the rial is envisaged a legal upon: ie, whether it was tion of orolecules rectula the whole cell itself the population of organia i nt one level of organizates lostruction at the high

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pon Sunare, London trilli Ort. Applications close on August 15, 1977.

Applications are invited for the following posts commons-ing steplier (d.) 144 LECTURER IN EDUCATION Candidates should be quali-lied in problemable of schem-tion. The opposition will teach of indergraduals, advanced diploma mut basebers degree feeds and offer an optimal course for 17.11.C. attlebuts. (2) IEMPORARY LECTURIAL IN CORRESPOND (Not. 199, 77, 11103) Candidates for this one-year and should be qualified in psychology in redention. The application of the capital psychology to education and forestable inclinity at unformational at unformational and allowed distance and physics's plegion jesule.

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Applications are invited for the first interpretary of the first interpretary in the first interpretary of the first inter nra Avillate, in pastern re-sonnel Manther 181821, The Open Humansty, P.D. Br. 75, W. You H.H. Miller Keynes, MRY 6 AL, or by filephonine Miller Keynes 4346H. Cleving days for applications: 13th July, 1977,

READING THE UNIVERSITY VALUATIONS

Applications are invited to a light The gnonintment will be from a date to he arranged with the surcessful candidate and will be for a fixed term of three voers. Further information may be evaluated from the Requires through the property with the property with the property of the propert

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The post becomes vector in Surjember, 1977, and it is successful applicant which take up the appointment by early 1978 at the less; Balary scales improximolo Kicrling equivalents: Liciture Orado II. 24,693 by £249 in £5,938 by £343 in £7,543 per annum. Lecturer throde 1. 27,607 by \$283 by ER,730 per bullion. Both permenoni censionable terms and short one or two-year contracts are offered.

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Polytechnics

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The Polytechnic

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Applications are invited for the following posts, tenable from tat Suptember 1977.

Lecturer (Grade II) in Operational

Applicants should have a good honours degree and have experience of working in the Operational Receased field. The person appointed should be willing to raige their specialisation Computing and/or Statistics in addition to teaching their subject.

subject.
The Department offers CNAA BSO (Honours) courses in Mathematics and in Statistics and Computing, an ItNi) course in Mathematics, Statistics and Computing, a part-time MSc in Applied Statistics and an evening course feading to a Presignaluate Diploma in Applied Statistics. Operational Research is included in all these courses.

The Polytechnia has an ICL 1905E computer with a wide range of software and there are good facilities for research.

Faculty of Economics and Administrative Studies

The oppointment is for one year from 1st September 1977 to the Jist August 1978.
The oppointment is for one year from 1st September 1977 to the Jist August 1978.
The opposite Management will be expected to teach a variety of subjects including Management Planning, Problem Solving and Decision Making, Case Analysis and Prosent attan, Negotiating and Business Objectives and Policy, Higher Insiness experience will enable blim/her to convey to students the manager's task of integrating functions and setting priorities.
The courses involved fuelted full-time, part-time and silvet, courses of degree and sub-degree levels.
Some course administration dulies will be required as will sevening and possibly occasional weetend tenching.
Applicants must leve a relevant degree or professional

Applicants must key a reloyant dogree or professional quelification and some years

Temporary Lecturer (Grade II) in.

The appointment is for one year from 1st September 1977 to the Sist August 1978.

Applicate should have appropriate qualifications and will be expected to teach to B.Ed. (Hons.) level. This appointment is due to be Polytechnic's participation in the scheme for the re-training of teachers in Mathematics.

Jacturer II 44146 - 26397.
(Staff at the top of the Lecturer Grade II scale can expect progression to the Sonior Lecturer coale subject to settlefying an efficiency requirement.)
Application forms and further particulars (Please state post in which interested) can be obtained from Establishment Officer (T). The Polytechnic of North London, Hollowsy Road, N7 8DB. Telephone No. 01-607 2789, Ext. 2017.

Closing date it days from the appearance of this advertisement.

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Temporary Principal Lecturer in

Management Studies

Faculty of the Humanities

ive of Landon Allowance Principal Lenturer 20884-27586 (Bar) - 28472

Mathematics

Salary Scales:

Jecturer II 84146 - 26387.

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BRISTOL.

THE POLYTECHNIC Applications invited for th inflowing tosts, duties to con-mence Sopieniser 1, 1977. ACCOUNTING AND

LEGEURER II, SENIRII LEGEURER IN ALCOUNTING Post Rot. No. 124 6 2 To leach limincial occounting and auditing to professional and business studies students.

Post Hof. No. 1.21, 54 To leach financial and man-surment accounting to students in the Department of Manage-ment Budges.

Applicants must be professionally qualified and have held speed experience in his held of exchangery relevant to the lymined specialisms. Degree would be an advantage, BOUTH WEST INCHENAL. DEF-ARTMENT OF DUSINGS

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Ref. No. LIBERS ASBOCIATE LECTURER
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No. No. E22:36

To teach in the brook send of Richard Brudies on a wide range of Richard National Discussions (Cartificots, June 1988), and professional qualifications DEPARTMENT OF ECONOMICS
AND SOCIAL SCHNOLICS

The appointment includes responsibility for tooching an the two-year combined finite understanding the two-year combined finite work courses for non-graduates. The work declades contact with piscement supervisors and individual interclais. The stellity in gham in the teaching all residental social work methods would be a particular advantage. Applicants should have relevant acadamic and professional quantifications in social

DEPARTMENT OF SCIENCE

Applicants should hold Un appropriate degree or follow-atin of the institute of deedical Laboratory Sciences with paths lary kiboratory experience of lary kiboratory experience of both instances. Preservince with the stress de capitales offerthy lasoning is both clinical charal-stry agai framinology. Salary scale; \$3,279 to \$5,051 there to \$5,051 there to \$5,253 there to \$5,417, plus \$512, plus Phuso 2 award.

KINGSTON THE POLYTECHNIC

BOHOOL OF PLECTRICAL AND ELECTRONIC ENGINEERING RESEARCH ASSISTANT IN CAD ST HIGH-STREED DID IT AL BYSTEMS

Applications are invited from graduates with U first- or support accond-class banous of our accordance angineering. Successive are designed in the law insert in the first production of https://doi.org/10.1009/10.10

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SHEFFIELD CITY POLYTECHNIC

Applications are invited for the following posts, which also through continued development of the Department of Botel & Latence Studies and Home Economics. The is a large and growing Department which offers a BSC of Cottoning Systems research depends (BPPI) and other advanced courses. There are excellent laboratory which allows a BSC to Calcing Systems research angular indentity of DiD and other advanced courses. There are excellent indentity and bleary facilities and strong on estagement in undertake constituents and/or represent conductions. Constituents for each of the uncertainty of patients by an appropriate degree, industrial estagination of (prairies by in the calcing or root industries) and, it possible, expectation to the calcing or root investing function. All courses are interfered plants and call for a nerv approach to haddrend subject distances.

SENIOR LECTURER OR LECTURER II IN SYSTEMS

Teaching will include organization indexy business organization

COMMUNICATION STUDIES (SOCIO-LINGUISTICS)
(2) SENIOR LECTURER/LECTURER II IN

The Department is responsible for an Horoma (CNAA) degree in Communication Studies and a wide range of courses in the Polytechnic as a whole.

Closhiji dale : July 20th, 1977,

The Department of Malhomatics and Statistics makes subclarded contributions to courses in the Family of Statistics and Management, Almost all of these contain specialised Statistics and some activate specialised Statistics of the teaching and development of the side and statistics of contribute to the teaching and development of the side and statistics. The Generalized line tole of Statistics and the person appointed metal well make contributions to this course. Ideally applicable should have qualifications and experience in Statistics, localize which sufficient on the Countributions in Statistics, localize which sufficient buckground to teaching the Statistics and the Mathomatics laught on the Quantitative Mothods courses in this policular mode.

Statisty Scale : Sentor Lecturer 55.524.68 147 Transpired for

Depertment of Urben and Regional Studies

Applications are invited from suitably questiond persons to assist in the leaching of Urban Estate themagaint at and possibly same tasting in Valuation. The inscensial condition will be expected to fetch from Higher Technician to Postgraduate levels in Estate Massagaments. Interests in project management, IEC practice and resources of project management.

Closing date : 5th August, 1977.

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The appointment will be for two yours with a possible extension for a further year.

Closing data: July Oth, 1977.

SENIOR LECTURER OF LECTURER II IN MANAGEMENT CONTROL

occurring and other subjects which enjoyments and together con-stitute the hold of management control. Closing data : July 22nd, 1977

Oppariment of Communication Studies

(1) SENIOR LECTURER/LECTURER II IN COMMUNICATIONS STUDIES (BEHAVIOURAL SCIENCE)

Especiale to Social Psychology with the necessary by post 2 solary Scale : Senior Lecture 15 5 200 447 (1001-25)205, Lecture II 22.744-25,205.

Opparimoni of Melinematics and Sintistics

SENIOR LECTURER IN STATISTICS WITH OUSINESS

Salery Banis | Banior Lockway 25,524-CB.147 | bail-68,300.

Closing date's July 28th, 1077.

SENIOR LECTURER/LECTURER II IN URSAN ESTATE

Salary Scalo : SL \$5,623-58.447 [0.41] -- Ch FO1 LH C 1.741-15 955.

Department of Guilding

RESEARCH ASSISTANT

Applications are invited for the nowl of Fusacuch Assistant to work as the early computer-aided design of mechanical retrices for buildings. Applicants will be expected as seek registration for a triggor degree of the C.N.A.A. A good howours degree to required in Building. Bestvices Engineering, Building, Mechanical Engineering, Physical Science, Mathematics or Computation.

Salary Scale : 22,661-23,036.

Teesside Polytechnic Dept. of Civil & Structural

Engineering and Building Applications are invited for the post of PRINCIPAL LECTURER IN CIVIL ENGINEERING (WATER RESOURCES!

To lead the Water Resources Section of the department Applicants should be specialists in Hydraulics, Hydrology or some other branch of the general field of

£234 £8,070

Application forms and lurther particulars are obtainable from the Statifing Section, Tespide Polytechnic, Borough Road, Middlesbrough, Cleveland TS7 3EA and are retuinable within fourteen days of the appearance of this adjustice and

NEWCASTLE UPON TYNE PHLYTECHNIC

Masquarele . Assestanceds [£2,44H-£2,8H0 plus £312 and £132 supplements]

Itenariment of Materials Science

Required to reork on one of the following topics: studies in the manufacture of plastics reinforced with carbon and other fibres, using novel instrumental techniques; studies of the determinipality reinforced with thermoplastic and high models of the plastic and high models of the plastic and high models. modulus organic fibres; studies of the merbanical proper-iles of metals teramics in High Temperature Corrostve Environments, Applicants should have a first degree and, or professional qualifications in selvane or engineering.

Department of Mathematics, Statistics and Computing

Comparing
Required to work on the encodation of spreading
resistance correction factors. The project is in collaboration
with a current programme of experimental tears within
the Department of Physics and Physical Electronics.
Applicants should have a good Homours Degree in
Mathematics. Some knowledge of osymptotic expansions
and the application solution of partial differential equations
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Department of Mechanical Engineering

Required in work on a project concerned with Information Fransinission in Fluid Pfpellines, Applicants should have a good Horones Degree in Engineering or Physical Science with an Interest in Huid mechanics and or

Department of Physics and Physical Electronics To note with one of the following groups; Thin film Devices Group actively investigating a while range of thin film devices ranging from optical filters to solar cells. An Assistant is required to undertake a study of fundamental stratural properties of thin films important in these devices or Applied Acoustics Group which has made a special study of traffic noise. An Assistant is required to assist hold in this work and also in an extension into other

Department of Surveying and Construction Required to work on a project consisting of the expectmental incestigation and theoretical modelling of the air velocity distribution. In the conditioned spaces, Applicants should have a good Homours Degree in Engineering, Physics or Mathematics with special interests in Fluid Mechanics and Formula. ud Tompodins.

In each case, the successful cambidate will be expected to register for a ligher degree. The Assistantiships are initially for a fixed period of two years.

For further particulars and application forms, remensible by Honday, 11th July, 1977, please send smapped addressed indiscip emelope to Staffing Officer, Newcastle apon Type Patprehale, Ellison Hollding, Ellison Place, Neuroisile apon Type NET SST.

NORTH STAFFORDSHIRE POLYTECHNIC

Department of Management Studies

SENIOR LECTURER LECTURER II in MANAGEMENT

Applications are invited for a lecturer in menegement studies who has relevant Industrial experience, possesses e degree in management or allied subjects (preferably et Masters level), end who can ofler a specialism in marketing and advertising.

The person eppointed will be concerned with teeching in general management studies in eddition to leaching in the specialist market-

Application forms and further perticulars mey be obtained from : Deputy Director (Steffling), North Stattordshire Polytechnic, College Roed, Sloke-on-Trent ST4 2DF

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LEGTURER

ART HISTORY

Cendidetes should hold e good honours degree and heve hed either post-graduete ireining or teaching experience preferably in the field of Design History. Teaching duties will be on the new B.A. (Hons.) History of Design end the Visuel Arts end eleo on the existing B.A. (Hons.) Multidisciplinary Design end B.A. (Hons.) Fine Art.

Application forms and further particulars can be ob-lained from the Deputy Director (Sietfing), North Stat-lordshire Polytechnic, College Roed, Gloke-on-Trent

Oepariment of Management Opvelopment Lecturer II/Senior Lecturer

Lecturer required to take responsibility for a decipility of the OMS programme as well as leaching, or her most of experitise within that programms Applicants should have expenence of industry or g merce. Experience of lacturing is important bet unarce. Experience of lockning is important but also is experience of compselling managers and size vising project work and experience of case study as Candidates should be able to teach general many must tophes and, additionably, ability to teach any city of managers of management interest may be discussed. of minustionion injected may be died Ref. S/AO.299A1

Oopariment of Management in the Public Service

Lecturer II in **Education Management**

Bused at Dunbuny Park. Cholinslord, lo work to per Bused at Dunbury mark, chomostore, to work as per gendulate, and post-experience Diploma and inhora programmes in education management for school colleges and local authority senior stall, with soke reteronce to Curriculum and Organisation Bahanga Higher depree in bohavioural actences required as elevent experience in education and shilly to a. staliatical techniques/computer application. Informal discussion may be held with Geometric or John Oavies at Oanbury Park (024 9 an Rel. S/AO.2990.) Salory Scales :

Lecturer tt-£3,279-£5,493 Sonior Lecturer—£5.D31-£6,417 Plue appropriato Government Supplement el sta maximum of £492 and applicable London Allegary Further details and application form item: The Bay Stating Officer (2), North-Eest London Polyschuk Forosi Rood, London E17 418. Telephone: 042 2272, Extension 20. Closing dole : 15th July, 1977. Plense quels som priote rotoronco no.

ARMC Anglian Regional Management Centre HORTH FAST LONDON POLYTOCHING - 6558% COUNTY COUNCIL

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Centre for Management Education READER in MANAGEMENT

The Maintennent Centre requires a Reader to constant extend the research work of the Centre, to portabilitatives, direction and support to research work by both staff and part-time research sudents, and to particular development and of duties, a direction particular development and of duties.

Farally of the Arts SENIOR LECTURER or

£6432-£8070

LECTURER II—Drama Applications are hirlied from persons who have but ex-lence of teaching drama as part of an academic for as well as having had experience of the performing

Salary Scales : Heatler Seular Lecturer (25221-16447/1690) Lecturer II (2741-15985)

The Polytechnic is a direct resta institution with an isomeon in the pendent liberal of Governors. It opened in 1971 and soft has a student appallation of some fitth, it has extended in 1971 and soft in the extended in 1971 and soft in 1971 and

Further paradentars and application forms which aged be returned by July 18, may be obtained by telephoning the ablicy (02111 65131, extension 2243, or by arribe to

The Estatilishment Officer, Usier College
The Natificern freight Palytechnic
Shore Rand, Neurlumnubhey, cu Anirim 1737 803

Leeds POLYTECHNIC School of Mechanical and

Production Engineering SENIOR LECTURER IN PRODUCTION ENGINEERING SUBJECTS

PRODUCTION ENGINEERING SUBJECTS

Applications are invited from persons with sitelity ecademic qualifications, particularly II they are renily engaged in the development of their subjects to teach on a wide verioly of courses up to BS. To teach on a wide verioly of courses up to BS. In the development of the subject of exact and to participate in the development is existenced by leaking the subject of the school offers excellent in the development in the development in the subject transfer the subject transfer the subject to t

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Oblails from:
The Services Officer (E.13), Leeds Polylechile, City verley Street, Lacds LS1 3HE. Tel: U532 41101.
Closing Oals: 22 July, 1977. Please enclose East.

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Applications are invited for the posts of :--

DEPARTMENT OF SOCIAL STUDIES

Lecturer II in:

(1) Behavioural Science (Sociology) (2) Social and Political Philosophy

(3) Lecturer II-Economics

Applicants for the throo posts above should hold a applicants for the little posts above should hold a good honours degree in the appropriate discipline, together with some leaching experience. Preference will be given to persone holding post graduate quelifications. Selary-Lecturer tt ts £3,591 to £5,805 + £132 to \$180 Satary Supplement, Inclusive of \$312 selary supple-

DEPARTMENT OF BUSINESS STUDIES

Please enclose large s.e.e. for lurther delails and application lorms (returnable by 15th July) to:-The Personnel Otticar, The Polylechnic of Wales, Pontypridd, Mid Glamorgen, Tel.: Pontypridd 40513S.

MANCHESTER POLYTECHNIC John Cellae Feculty at Technology DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

RESEARCH STUDENTSHIP

The Science Research Commell has approved a research project en-lited MICROPROCESSOR BASED AUTOMATIC PRODUCTION TEST ECUIPMENT for the award of a Research Studionistip lossbia under the Coppositive Awards in Science and Engineering (CASE) Schome ha association with Philoem Electronics Lid. Blackburn. "in association with Philicom Electronics Lid. Blackburn.

Applications are invited for this similarisation from graduales inviting a first or apper account-class becomes degree or agricultural quelliter. Son in Electrical and Electronic Engineering or other opprepriate subject of students expecting to be an qualified this session.

The sward will be to a posted of up to lings your and value to mile normal SRG Studentship tale which can be increased by a supplement of up to 1500 per annum seconding to circumstances.

For further certiculars and application form treturable by 31 July, 1977) please send a sell-addressed envelope marked "T/337" to the Seculary, Manchester Polytechnic, Lower Ormand Street, Neachester, M15 85X.

THE POLYTECHNIC HUDDERSFIELD Research Assistants

Applications are invited from graduates with good Iterem at applications to positions in lessowth American to positions in lessowth American in the departments listed below. Successful conditions will be expected to work for a ligher CNAA dugleo.

TEXTILE INDUSTRIES

ACA/46 Two graduates in TEXTILE TECHNOLOGY in reinfold disciplines to work on any of the following: the dimensional stability and geometry of knitted lighted and computer simulation of leavy young: the humaniship of textiled application of leavy young: the humaniship of textile mituality; the assessment of textile mituality of textile source of source of the production analysis and computer with the production and the product scopio methode. A graduato in TEXTILE OESIGN or related disciplines to work on patterned needle punch tebrics or computer-aided

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LECTURER |

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Candidates should hold a good honours degree in Geography and be able to contri-bute especially in Rural Land Use and Seltiement. An interest in e tropical region other than Africa would be an advantage application forms and further perficulers may be abland from the Ceputy Director [Stalling), North Stalling Polylechnic, College Road, Sloke on TrantBRIGHTON POLY-TECHNIC

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> Applicants should favo high actualisms qualifications, with a special interest in Anniys's or Statistics/O fl., together with investibility and statistics of technique, industrial or research experience. Appointment will be made at an appropriate point on the Salary Scale (3.744-26,500 (Coctors II -- Sonity Locturer).

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ARCHITECTURE Applications are invited to the pool of Course Oirector for the doctor and graduate diplome course in Landscape Architecture. Applicants shall have both acadeato and protosolonal qualifications in Landacops Architecture legalitor with proven experience of Landacops and practice of the proven opening and practice.

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Selary C1,295 per annum tax

Halary \$3.430 to \$2.601 our Application forms and fur-thee details for all posts avail-date from Halfing Officer, Leiconer Polytechnic, P.O. Box 1-13, Leiconer LE, 9811.

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To teach Physics to a wide ronge of courses from "G" course in Science to ONC, ONO, and "A" levels. Applicants should be graduoles in Physics with industrial experience of lescher training en sided advenlege.

To teach to a wide tenge of courses, Applicants with groduste quelifications and expertance to various fields end/or with training in General Studies are specially welcomed, Experience in commorce or industry would be

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Applicants should be members or studying

Selary will be in accordance with the intoel gumbam Scale for Teochers in Establishments of Further Education; Lecturer 1: 52,781 to \$4.888 plus eppropriate 1977 eup.

Stamped eddressed envelops, please, for tur-liner perficulers and application forms from the Vice-Principal. Applications to be returned as soon as possible. It is hoped that inter-views will be held during the week com-

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Applications ere invited for the above Studentship; finenced by the SRC Goote Company Ltd. to study. the Phermacodynamics of Ethidium Bromide. Tha studentehip te evalloble for three years from October

Applications from persons holding or expecting to obtain a good honours degree in Glochemistry should be sent, with e curriculum vise and names of twb. relevees to OR, O. A. NEWTON, MOLTENO INSTITUTE. UNIVERSITY: OF CAMPRIOGE, DOWNING STREET.

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On the date is 17 dates from the upper rate of Adsorbertisement.

Reigete Road, Ewell, Surrey

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To leach Measurement & Economics and Construction Technology on the Higher National Certificate end Olpiome courses in the Ospariment. The auccessial cendidata will

lo: the Institute of Quuntity, Survoyors or the Institute of Buildings Final Examination Pert topellor with sound industriel experience. Teaching experience is desirable but not essentiel.

plement and £150 p.e. London Allowence poyeble. Goneroue relocation expenses in ap-



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CAMBRIOGE CB2 3EE, by July 18th, 1977.

PAISLEY COLLEGE DEPARTMENT OF ECOHOMICS AND MANAGEMENT

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Research Studentships

Applications are invited from candidates with a good lionous degree in Economics or a related discipline to undertake research for a higher degree [M Phil/Ph.O.) commencing September, 1977. One of the studentships is funded by the S.S.R.C. and two will be College trinded. Preferred ereos of sludy are within existing Opportmental research specialisms in

(e) Economics of Multinellouel Enterprise (current project funded by S.E.P.O.).
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Further perliculers and epplication forms from Professor P. J. Stoane, Department of Economics and Management, Paistay Collega, High Street, PAISLEY, Rentrewshire, PAI

Closing date 22nd July, 1977.



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Principal fields are Energy Conservation as e design parmillelar, and the violetity of Environ-mental Sciumes techniques as design oids. Itelli projects are oriented towards two buildings.
Applications giving particulars of qualifications and experience, together with the names of two ecodemic reference should be submitted within three weeks of the appearance of this edvertional statements.

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Further dotails may be obtained from Dr. A.
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Research Posts

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Research Fellow

INTER-MEDIA TRANSFERS OF POLLUTANTS RESULTING FROM POLLUTION CONTROL.

The rate year study is to be limited by the Department of the Engineeric and audetaken by Trent Polytectine in computation with the University of Bath Camandala, who should probabily have produce industrial or coverable repairance, may layer a background in chemistry, chemical orginecting or openions. The appointment will be offective from 121 October, 1977.

Solary according to age and qualifications up to \$2,800 per onnum. Further particulars and form of opplication may be obtained from the Chief Administrative Diffeer. Trans Polytochric. Burlon Street, Notlingham, NGI 48U Chesnel date 20th July, 1977.

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Announcements

BBC

Committee The Committee set up hy the BRC was chaired by Lord Ariggs has now resched the stage in its work, where it would be gled to receive the views of interested bodies. In the first lostages, written statements should be sent to Richard Hewlett, liend of Reference and Registry Services, BBC, Brondensting House, London W1A 1AA.

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The SBRC Committee on Social Sciences and the Law invites spottations from rate-yani despringers, in universities and polytechnica for support for a two year resourch information in socio-logal studies.

Lecturer II In Education with particular reference to Sociology of Education

PAOGATE COLLEGE OF

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A Temporary Full-time

The Tuter will be required to least the Sociology of Entrollon to Toucher's Certificate, Initial 6,Ed. studeats and to take part in the supervision of leaching practice, Aprilicants should have good academic quelifications and tasching experiences.

The appointment will be for one esademic year, commencing tal September, 1977. Application forms can be obtained from the Principal Padgote Collage of Higher Edu cation and rot lete than 18th July, 1977.

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cellons, degree level knowledge of French and Ger-or Spunish and recond business expedence. Piece teaching experience is highly desirable.

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NEW EALING COLLEGE OF HIGHER EOUCANA ME. SEPTEMBER, 1977. This post will be to: one year only, from tel Septe

1977, to 31st August, 1978

Further details ere evatioble from Ths Registrar (UC) Enling Technicol College, St. Mary's Rond, London, WS Closing dnie: 15 July, 1977.

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leaching and a higher degree are describe in or the leftering fields. Eighteenth Century Literalise. 80 Further particulars and application forms obtains in the Principal, Sentitlends College, Windtedon Pales London SW19 SNN (1ml. 81-9-16, 2234). Closing data

receipt of applications. Title July, 1977, ECOLE DES AFFAIRES DE PARIS

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MIT DEUTSCH ALS MUTTERSPROCHE Och passendon Personon, die zumindest elwes Unit richteoriahrung habon müssen, wird sehr ger schliegen eine Bozohlung und Arbeit in freundelteher und Informatie Englischen

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el Glesgow Colloge of Technology, Cowoaddens Roed, Glesgow G4 OBA. Good first degree, with postgraduele experience and prelarably in higher degree. Intereste to metabolism and exercise are desirable to the degree of the second sec

exercise are destrable but not essential. Taecher training will be an edventage but training of an in-service beste will be given if necessary. Salery Scele: Lect. 'A' £3,528 £8,324 [8sr] £6,807.

Plecing on selery ecales will be given to experience. Forms of application and further particulars can post-obtained from the college to whom completed forms should be returned not (attached, 15th July, 1977).

Edward Miller, Director of Education

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Vice Principal

Applications are invited for this newly crusted post which will be based on BCN London Headquarters. Responsibilities will include the co-ordination and development of the nhort, special ordination and development of the nitrot, special and raireable course programmes. The individual appointed would be expected to initiate change in the current exemination and assessment systems and to review and develop the currouting of axisting courses in consultation with other

The successful candidate will be a nurse holding a teaching qualification, Merked organisational ability and a capacity for innovation are assential Possession of a degree is

For details and an application form apply to the Porsonnol Officer, Royni Cottage of Nursing, Hundella Ptocs, London W1M OAB, Closing date for return of application forms 22nd July, 1977.

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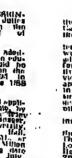
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The appainment is pendiomobile, and encountries magnitable depending upon qualifications and experience within the renge \$7,000 per annum.

Applications, supported by a C.V., stoling evaluability and pro-lant anotherent virtual bu anni to The Secretary, Council of Englanding Institutions, 2 Little Smith Street, Wasterland, Looder SWIP 2DL, in an envelope marked PRIVATE AND CON-TRENSIAL.

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SUMMER VACATION July to September

Overnight accommodation in LSE Residences Individuals/School parties welcome

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Colleges of Education

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Principal: James Pomfret, M.A., D.Sc., M.Ed.

Stranmilis College is a College of Educallion, of about 1,020 students, who are preparing to teach in nuisery, primary and secondary schools through the Certificate (3 years), B.Ed. Degree (3 and 4 years), and Post-Graduate (1 year) comises. The College is non-denominational: There is no religious test.

The College is pleasantly situated in an attractive wooded ostate of some 45 acres. in a quiet residential neighbourhood on the southern outskirts of the City of Bellast. New building projects to the value of £21 million have been completed in the lest few

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Applications are invited from well qualified Mathemetics greduales with teeching or lecturing experience for appointment from Jenuery 1st, 1978. In September next, new courses leading to the B.Ed. Degree of The Queen's University will be introduced; normal university entrance requirements will

operate, and honours will be evailable. Il is hoped to make this appointment before the lest week in September; the closing date for receipt of applications will ba September 2nd.

Selery Scele: Lecturer/Senior Lecturer £3,279 to £6,417 p.a. plus £312 p.a., plus a further increase under the Pey Code from April 1st, 1977.

Assistence with removal expenses from outsida Northern Irelend. Further information about the College end the eppointment, and a form of epplication, may be obteined from: The Secretery,

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London College of Printing

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Principal Lecturer in Complementary Studies

Applications are invited from Social Science Graduates for the above past. The person appointed will undertake significant tracking and administrative duries in a department which provides courses to some 4,000 students studying a range of subjects related to vocatious in the Communications Industry at envilling from apprentice to degree level. Experience of CNAA negotiations desirable, as it is ability to help lead forward a rapidly developing department. Selary: 15,940,66,842 (bar)-17,598 plus 1402. Inner: London Allowance and Supplement of 1492, subject to formad approval.

Further particulars and application form (returnable within 14 days) may be ob-tained from the Senior Administrative Officer at the College.

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toquited for this national autonomous body. He/sho will be one of a small team assisting the Executive Secretary in the general menagement of UKCOSA and in working relations with member diganisations intend of UKCOSA and in working relations with member diganisations intended in the process of oursing, autoent unions in the process of oursing, autoent unions and development departments. He/she will be expected to develop positivitar areas of the Council's journal, itsining and field work. The production of the Council's journal, itsining and field work. The successful sending will probably he a graduate in his/she twenties, with some previous administrative experience and service overses. Starting salary according to age and experience on a scala trom C2.511-55.530.

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KEEPER of the Department of BOTANY and ZOOLOGY

Applications are invited for the above post. Applicante abould hold an Honours Degree in an approoriate subject end heve considerable museum exparlance in a relevant field of interest.

The department covers a wide field of collection end esearch, and within recent years important new gellation of a high display standard have been preperod and aponod. Under the Director the Keeper will have control of and responsibility for general departmental policy with regard to the acquisition of e wide ronge of epecimens. He/ehe will be expected to initiate and programme research prolects based on the collections, or on various especis of field research; to supervise the continuing preparation of further museum displaye; and lo control the general conservation and curation of the

The department contains important herberta and has e qualified diving learn pursuing an ective progremme of underweler research in Strangford Lough. The Ulator Museum has an expending aducational service and livere in close lietson between the mussum and the universities in matters of mutual

The selety for the post will be in accordance with the Civil Service Deputy Keeper grads-el present £7,151-£6,750 per annim--plus supplements of up to £521 per annum.

Application forms and further datalle are available from the Administrative Officer, Vister Museum, Botanio Guidens, Belfasi BT9 5AB, and completed epolicetions should be returned to the Director by Aonday, 25 July, 1977.

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Production Assistant

with good acedemic end educational qualifications, with mathematics or physics as a major subject, to work on television and radio programmes for Open University courses. Training in production will be given. Applicante should have at least two years post-university experience. Besed Alexandra Palace, North London, until 1981; Milton Kaynes thereefter.

Selary: £4,341 p.a. (moy be higher if qualifications exceptionet) x £169 to £5,191 p.e., plue unconsolidated attowance of £400. Plus Pay Supplement of £17.38 per month under current incomes Policy. Write or lelephone immadiately for further detelle and epplication form (enclosing eddressed foofscap envelope) to Appointmante Deperiment, BBC, London W1A 1AA, quoting reference number 77.G.797/THES), Telephone 01-580 4468, Ext 4825.



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